

BOARDWATCH MAGAZINE

Guide to the Internet, World Wide Web and BBS

106th MONTHLY ISSUE

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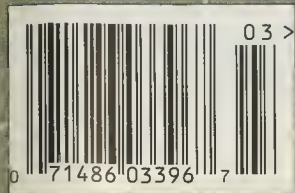
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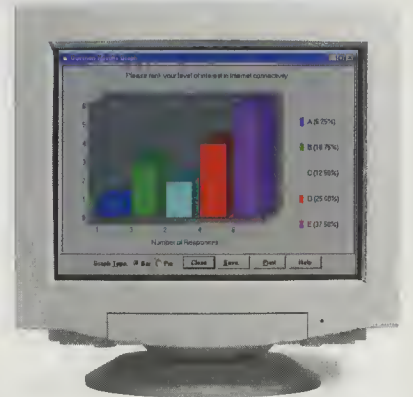
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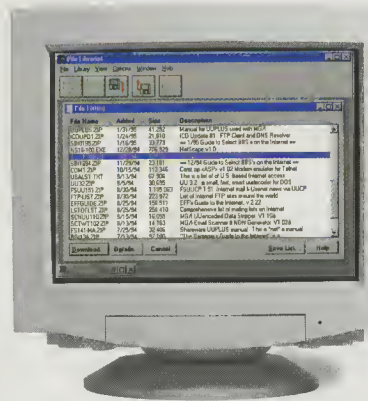
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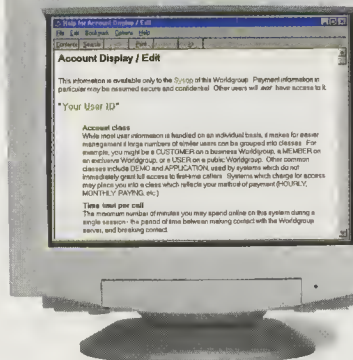
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Guide to the Internet, World Wide Web and BBS

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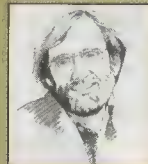
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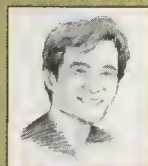
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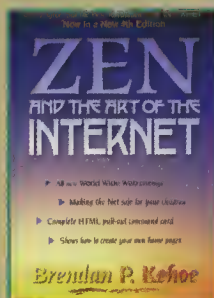


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Okay, Phil . . .

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I'm telling them!

Memorandum

eSoft

To: Alan Bryant, Director of Marketing
From: Phil Becker, President
Re: Internet Protocol Adapter (IPAD)

Alan,

Over the past two years our engineers have taken the hardware from design to production and completed a full one year field test to prove that the IPAD really is the Internet Connectivity Appliance we set out to make. Those lucky enough to find out about the test program and get an IPAD have clearly said that it is a winner – it allowed most of them to have their Internet connection up and running in a single day! The IPAD even won the Dvorak Award for Telecommunications Excellence!

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We've even put in place our Certified System Integrator program so we can support integrators who install systems based on IPADs, and you know that the production line is running and IPADs are available for immediate delivery!

As I remember it, you are our Director of Marketing. So how come you haven't yet told a SINGLE PERSON that they can buy IPADs NOW!?! Quit staring at that blueprint and tell them that if they call eSoft at (303) 699-6565 they will no longer be alone in the Internet Jungle. Make their life easier – tell them to call and find out about this hot stuff! I promise you they'll thank you for it.





EDITOR'S NOTES

A DOMAIN BY ANY OTHER NAME WOULD SMELL AS SWEET....

I usually pick a topic and write a couple of pages on it. We call it an editorial. I guess it is since I don't let the facts influence the writing style overmuch. This month, I'm going to gather together what I can and spill what I know about it.

The Domain Name problem gets worse. Network Solutions, Inc. is the entity that has inherited the process of domain name registration. They are available at <http://www.internic.net> on the World Wide Web. They have rather become mired in a sticky wicket with this domain name thing and now on their fourth policy iteration, they really aren't any closer. Their main objective is to avoid the expenses and distress of litigation over domain names. So most of the policy is actually an attempt to persuade those who register domain names that any legal hassles over a specific domain name are at the expense of whoever registers the name, and that you agree to pay the InterNIC legal expenses if there is any legal dispute.

And it seems litigation is part of everything these days. We went eight years without a lawyer at Boardwatch. I think we probably have five on the payroll now to some degree or other — not counting any who might write about anything. My only comfort is that the legal system is so clearly near collapse from the volume that I doubt it will be the same three years from now.

In any event, I have heard numerous "authorities" at these various Internet conferences urge people to get their domain names registered before somebody else does. I've known all along it would get a bit more complicated than that, but even I couldn't see what a mess it was going to become. Domain names are important. And there is no real solution.

The latest series of puzzlers come from those who have their own names as domain names. Alan Bryant has bryant.com registered and Mark Newton has newton.com. The problem is that Bryant Heating and Air Conditioning wants bryant.com. And Apple Computer, of all people, is desperate to have newton.com — the vainglorious failure of the Apple Newton handheld computer notwithstanding.

The InterNIC has already developed their policy document into something so badly written and complicated that it makes Fidonet documentation actually look lucid if you can picture it. Basically, if you have a domain name

and someone comes up with proof of registration of that name as a federally registered trademark, they give you 30 days to come up with your own federal trademark registration information. In the event of a tie, they put the name on HOLD and force you to arbitrate it. I can't imagine this making anything go away. It looks like law written by a computer geek, which is about how it happened I suspect.

The problem is that there is a very clear exception to trademark protection written into the trademark law. If your personal name is really BRYANT or NEWTON, your rights to your own name cannot be abrogated by any trademark registration. InterNIC is sitting on a time bomb waiting for someone named NEWTON or BRYANT who isn't poor as a church mouse to blow this one up in their face.

But this points up the basic flaw in the InterNIC approach to this problem. They started on a first come first served basis, and then changed horses in mid stream. Sure, they need to get the personal name proviso into their policy document. But it won't help. They are retracing the steps of trademark law evolution in real time. They will ultimately have to suck up the entire body of law and case history into their policy document. Were it I, I would stick to the first come first served, and note that we obey all court orders from any court whose jurisdiction we fall into. In other words, sue each other until your eyes bleed, and anything the court sends us by way of result that is doable, we will do.

The heart of the problem is names themselves. People erroneously believe that every person and every business in the country has a unique name. Not so. Companies typically register within their states. There are a zillion AAA Automotive's across the land. But typically, they operate within a local area. Similarly, Jack Rickard was a unique enough name 50 years ago when Jack Rickard was unlikely to travel more than 25 miles in any particular direction. When you develop a network that spans a continent, it gets a little crowded with Jack Rickards — or Mark Newtons for that matter. You could hold an annual convention of either in fact and probably draw as many as we do to our Online Networking Exposition each year.

Understand that this problem is already critical with less than 4% of the population actually online. What will happen if there really are 35 million people on the Internet in a year or so? Or worse, 100 million? It does not seem at all unlikely that some seven million different companies will all try to develop a net presence over the next few years.

There really was a solution to this in the beginning. We just never bought into it. The

domain name system was actually designed to be geographical. I think we still have some registration as boardwatch.littleton.co.us. I originally wanted it to be boardwatch.denver.co.us. but they insisted we were in Littleton, which we more or less are, and so there we were and here we are. Had this system caught on in the United States, as it has in most European countries, boardwatch.littleton.co.us would be ever so different from boardwatch.arlington.va.us as we can clearly see. That we had the same name would not matter so much unless we were in the same city, in which case we would have problems other than domain names anyway that would have long since been worked out on the local level.

But nobody wanted to do it that way. You see, there were EXCEPTIONS. Like .gov and .edu and .mil, and yes, .com. The .com domain was for commercial activities as different from government, education, and military. But it made for SHORTER domain names. And there was status in shorter names. And shorter names were easier to remember and print on business cards and so forth. BOARDWATCH.COM just works a lot better than boardwatch.littleton.co.us.

So the domain name system as designed broke down, and we find ourselves attempting the impossible over this domain name problem. And at this point, it looks like he who has the most to spend on lawyers wins. This is good news for Apple Computer — but only for the moment. They will probably win the NEWTON.COM war and they should sit back and congratulate themselves on being able to beat up Mark Newton and his little Newtonian BBS at Newton.com. And they can feel as smug as they like that the few hundred users of the Newtonian BBS now have to ALL change their e-mail addresses because Dave Grace at InterNIC doesn't want to be bothered and Apple had a registered trademark and a lot of lawyers. And while they are basking, I'm probably going to drop a dime to Nabisco. I doubt they are aware that Apple Computer has hijacked on a global basis the rightful position of the fifty year-old *Fig Newton* brand.

You see the battle of bigger and earlier is almost endlessly extensible. And hundreds, thousands, even millions of e-mail addresses could be displaced by a single one of these little legal battles. If it were me, I would grandfather all domain names effective today and all new domain name registrations would be forced to the .us domain broken down geographically. But it isn't, so I guess we'll just slug it out in the courts for a few years.

Speaking of which, we were rather taken to task by America Online over our article on

AOHell by Wallace Wang. The heart of this seems to be a software program by an anonymous author titled AOHell. AOHell is an add-on program that works with the AOL access program to do a lot of different things, some useful, most just irritating. It was apparently written as a protest by a self-avowed "hacker" self styled *Da Chronic* who got squeezed by America Online for discussions on hacking while, from his point of view, they actually protected the status of pedophiles on their service. So he wrote this program that allows you to bomb e-mail boxes, flip the ASCII finger in chat areas, access pay services from free areas, clear out dupes from your own mailbox from other bombers, and just generally make a nuisance of yourself.

An AOL representative called and described the program as a fraud engine with child pornography built in and under investigation by the Secret Service and the FBI. From my peek at the program, not very much of this is actually true. The FRAUD is primarily that the program allows you to do things AOL doesn't want you to do as described in their terms of service. But it can generate fraudulent trial accounts on AOL, and it is generally a nuisance. It exhibits no child pornography of any kind that I can detect and in fact seems to be in protest of child pornography ON AOL. It does contain an ancient credit card number generator that has been floating around forever, that can also be used to check credit card numbers. In this respect, it does nothing that can't be done manually. The credit card algorithms have been public knowledge for years.

In any event, that such a program exists is interesting in a technical sense. That such a protest against AOL was made in software by the author is kind of newsworthy actually. That AOL has some technical system flaws that allow such a program to actually be harmful is more a function of their own system than anything else and I would urge them to harden their system using the usual and not very advanced techniques.

But Mr. Wang's apparently enthusiastic advocacy of the use of the program to actually make life miserable for other AOL people does not reflect my personal views of a live-and-let-live online community. I don't personally like AOL, and I don't exclude protests simply because they are effective and others are inconvenienced. I find the program and its existence interesting, and much more in line with my views of freedom of speech than the areas on AOL discussing man/boy rape. But we don't advocate its actual use to dork up a chat group on AOL or any place else, or to perpetrate credit card fraud of an online service.

I would urge AOL to address this situation as all hacker attacks should be addressed, find out what they did, and harden to prevent it. You may look at it differently and more favorably sometime down the road when someone serious starts taking down systems for genuinely nefarious purposes. But we are going to remove AOHELL from our FTP site. It's a bit vicious, not only to AOL but to innocent AOL users as well, and serves little useful purpose.

CompuServe similarly struggles. They bowed to the German government and removed some 200 newsgroups from their system, blocking everybody worldwide from this information at

the behest of a single government. But it gets worse. Now the German government is incensed because a German user was able to access a web site in Canada that featured Nazi hate information. The problem is of course that CompuServe can't offer connections to the Internet, and then screen what web sites on the net the users can access and what sites they can't. The heart of this problem is that an Internet is almost inherently ungovernable. An Internet that spans national jurisdictions IS ungovernable by any definition. But the Alice in Wonderland nature of government in the 1990's is such that they abrogate their governing responsibilities by palming them off on private companies. I think we are going to see reiterative efforts by our own government and others to make problems go away by scapegoating individual Internet Service Providers. As foretold in these pages nearly two years ago, the only road to any kind of survival for the large commercial services is as Internet Service Provider for the near term. They will be the early targets of this governmental wishful thinking. It is time we protest this fantasy that the impossible can be made possible by bureaucratic or judicial decree. It is not possible to make a single service provider responsible for all the text traffic on the globe, and shutting them down one by one in selected geographic areas irrelevant to a global network in a kind of "gotcha" lottery is utterly nonsensical. But it can be damaging to individual providers.

And we are there. We're looking at 160 countries on the Internet and some 1450 access providers and growing here in the United States. Al Gore's concept of an electronic Interstate Highway system funded by the government was cynically bought away by political contributions to the Democratic National Committee from MCI, Nynex, U.S. West, AT&T, Sprint and other telco behemoths. They basically told Gore to sit down and shut up and here's the cash and he did. MCI coughed \$50,000 the day after Gore announced that backbone development should be done by private companies rather than the government. The amount of control of national telecommunications policy owned, bought and paid for by these companies should cause actual jail time in this country both for the political leaders who accept it and the corporate executives who pay for it — with your money of course. It would be a national scandal if anyone was aware of it in any detail.

In any event, the only way they are going to control the Internet is to award it to one or a handful of large players who will agree to disconnect anyone who says anything deemed undesirable by the government — or any government I suppose. The effect would be to convert the Internet from one of the freest forums for effective speech the world has seen to one of the most restrictive forums where no one can say anything of any importance. And both the government and the large players are very anxious for it to happen.

The only thing going in our favor is the number of large players circling. Microsoft has entered into partnership with both NBC and MCI to do news on the Internet. Every national news organization including ABC, NBC, CBS, and now Rupert Murdoch have announced 24 hour news networks to go after

Ted Turner's obvious success with Cable News Network. MCI just won a bidding war for some direct satellite TV spectrum with a \$650 million bid. It's gotten to be a very big game.



On another topic, we've completed our survey of Internet Service Providers nationwide and by the time you read this the **Boardwatch Directory of Internet Service Providers** should be available on the newsstand. We gained a lot of information from and about the delivery of Internet access in the United States. One of the things we learned is that the vast majority of our core group of ONE BBSCON attendees are now Internet Service Providers — not terribly surprising in nature but even we were stunned as to the extent.

As a result, we are renaming the Online Networking Convention and BBS Convention (ONE BBSCON) to the Online Networking Exposition and Internet Service Provider Convention (ONE ISPCON). I'm a bit alarmed at the sheer number of badly done Internet trade shows — some 95 already scheduled for this year. I've attended a number of such shows in the past year and they've been so uniformly bad that I fear being painted with the same brush. In the past four years, we've produced one of the most tightly focused trade shows in the world — last year featuring some 187 educational sessions of 60 or 90 minutes each on the topics surrounding the delivery of online services. This year's event, scheduled for August 7-10 at the Hilton Hotel in San Francisco and the Moscone Center, will be strongly focused on the Internet Service Provider and the hard lessons of what is good for a buck on the Internet — and what isn't. If you haven't been to one of our past shows — fair warning — this isn't a feel good party. It's almost entirely entrepreneurs small and large who are striving to divine the future and figure out a way to deliver services to the public profitably and successfully. It's not so much a produced "show" as it is an industry brawl. If you want a pleasant room with a would-be expert to convince you that there are 35 million people on the Internet waiting to make you rich, it will be a bit of a culture shock. These guys are already doing things, have a lot of sweat and cash already in it, and have a bullshit tolerance level of something strongly on the negative side of zero. We also have a strong contingent of corporate MIS people who have to go back knowing where this is all going over the next year. In short, it's a show for the players. We think San Francisco will be a good site for it, and we're planning for a blowout event. Call (303)693-5253 or <http://www.ispccon.com> to get onboard.

See you there.

Jack Rickard



Letters to the Editor

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THE LOOSE LITTLE THING INSIDE...

High Jack and Colleagues,

After reading Negroponte's book "Being Digital", and Perelman's book "School's Out", one pretty much gets the opinion the Information Age is well at hand. Mix that with the immersion into silicon we are experiencing...everywhere except in the bathroom...and you'd think we might really do it. Then along comes this archaic behavior from the past.

I speak of the post-card size insert that fell out of my February issue of *Boardwatch* when I took the wrapper off. Near as I can remember, there have been few or no such marketing devices in *BW*...either that or they all fell out in transit to my mailbox.

Boardwatch has become a nice high quality (and glossy) magazine. As I understand it, the glossy paper does not recycle as well. And, I've heard that paper makes up over half the stuff we discard to the Realm of the Dump. It's my personal feeling that if our governments (local, state and federal) invested less time making laws and more time doing some of the good-for-all infrastructure stuff...like "instituting" (governments are great at this) recycle processes that work. Just as we whipped out the interstate highway system in the '50s (though for the wrong reasons) and the Internet in the '70s (for the same wrong reason: military), recycling could be one of those things that exemplifies how functional governments might be.

Until the secondary problem of recycling is overcome (the primary being our insane drive to create so much junk in the first place), I rate myself at 85 percent when it comes to separating out my plastic, paper, aluminum, tin and glass...first stockpiling and then carting the stuff to my local King Sooper grocer. Little "psycho-political" problems like weighing the waste of energy and water to rinse things out first, float thru my mind nearly every time I participate in any part of the recycle act.

The human mind has the best-oiled set of rationalization gears of any gizmo on the planet. And, with the recycling dilemma being something we are (very) slowly raising to the social conscience level for solution, my mind can zoom along smoothly with the near Catch-22 of having a fine rag like *BW* coming to my mailbox each month, vs. the over 60 percent of the stuff in the dump being

paper product. And further, I don't discard my *BWs* anyway. They get dog-eared, loaned out and used for reference. The high-gloss (yuky in the recycle bin) makes for durability and any bits of loose food or drink that spill on it while I am ingesting words and food, wipes right off. I love it.

As we flow into the middle of high technology with all our bits-n-bytes paved highways, I was wondering why those creepy little cards are showing up in my *BW*? Have you been done this before...say as a scientific experiment...and it has gone right by my selfish rationalizations (I love my *BW*)? I stopped with *PC Mag.* in the mid 80's because of the density of advertising versus "meat" and the constant rain of postcard pieces of paper that trailed behind me when I walked anywhere with the thing.

Finally, in all this sleazy diatribe, my real fear may be surfacing: I'm afraid my esteemed *BW* magazine is headed towards that same proverbial shitter. This can't be!

As we move into an era where we are exchanging our atoms of paper for the more etheric kind, am I the one who is lagging behind with this lament? Could be. In the meantime, since I DO take advantage of those cards when nobody seems to be looking, could you keep it down to just one per issue. In the flamboyance of protecting my own personal ego concerns, I tear the slippery little buggers up and use them conveniently for bookmarks and notepad material...but one per issue is ample for my tastes.

Excuse me Jack, it's time to take my medicine now. Let's see, open the cover to pg. 8..."Tom Jennings, the author of Fido BBS, was a self-avowed anarchist. Not in the popular sense..."

Thank You Jack and friends for dishing up the sweetest kind of medicine my Rational (the cap is because my left-brain is so huge it distorts the shape of my head) mind enjoys...words...

Marv Miller
marvm@rmii.com
<http://rainbow.rmii.com/~marvm>
Colorado Federation of Public Employees (CFPE): <http://www.cfpe.org>

Marv:

I've puzzled over the same paradoxes and conundrums regarding paper myself and for

some years to no clear end. Magazine publishing, at least the way I seem to do it, is a pretty low margin business with almost all of our funds simply passing to printers and the U.S. Postal Service. We live on the residue left since it is devilishly difficult to hit zero exactly. And if you see *Boardwatch* on the actual press, a couple of stories high and running paper a little over three feet wide whizzing by at several hundred miles per hour, it does give pause. If I could make that monthly printing and postage bill go away, I really would.

But I clearly recall the period in the late 1970's when personal computers were, I suppose, a bit embryonic. One of the recurring questions of the day revolved around "What were they good for?" - a kind of ungrammatical query regarding their ultimate necessity and use. This same question has been applied to online communications and the Internet more recently. But personal computer printout devices in those days were terribly slow, produced awful output made up of blue dots on the good ones and more commonly thermal printouts burned into silvery "paper." Whatever marvels the PC might produce on screen weren't very useful until they were printed out on paper so they could be used in the "real" world.

Let's talk further a bit about perceived value. Consciously or subconsciously, we attribute value to printed publications, and fail to attribute value to electronic publications. When we find a regularly published electronic newsletter published either by mailing list or via World Wide Web, it tends to be dismissed if it only exists electronically. I've seen numerous efforts on bulletin boards in the 1980's and again more recently on the World Wide Web that by all that's holy should make it. The writing is good, the presentation, particularly on the web, is good, and they should be immensely popular. But they fail. Meanwhile, print publishers seem to be able to put up very modest, even slovenly, online versions that deliver very little in the way of useful articles, but draw quite a crowd simply because they are affiliated with a popular and well recognized print publication. The perceived value is infinitely higher simply because the publication is distributed in print - and on paper.

I read a good bit from a CRT and a good bit from paper pages. And I'm in a position where I can routinely watch people read from a CRT and read from paper. For whatever technical reason, reading of any length is

easier from a piece of paper, even if the characters are smaller and not as inherently attractive. The CRT simply can't present more than a couple of linear inches of text you see on this page, and we do not read as linearly as we believe we do. Our eye roams the page, reads ahead, runs behind to compare some small item, refers to the accompanying photo several times from several different parts of the story, etc. This activity is severely limited when we put a much smaller segment of the information up on a screen. And I conclude that the actual mental and physical PROCESS of reading differs dramatically depending on whether it involves paper or phosphor.

Finally, paper is at this point the most portable form of information. It doesn't require any equipment, connections, radio waves, or even a pencil if all you are going to do is read it. It can be folded and inserted into the hip pocket, and whipped out on a beach in Borneo or a men's room in Manhattan, and even on all the airplanes and airports in between. You can show it to other people, and with no connection beyond physical proximity, they can read and understand it as well.

I conclude that if we had developed the transfer of information entirely electronically, via networks and computers and cathode ray tubes, and the concept of printing text and images on crushed and pulped tree cadavers was developed just this month, it would probably be viewed as the greatest innovation ever in computing, and perhaps technologically of this century as well. It would be the "killer app" of all time. The developer would go from entirely unknown to a global celebrity in a matter of days and the stock in the embryonic company would soar to many millions of times its book value immediately.

But we don't tend to think of it that way. The concept of replacing paper with electronic documents has been discussed continuously and annually since the late sixties. Each year, we find that further developments in computer technology enable and empower us to produce ever more paper ever more efficiently than before, and so we do - to the point that the cost of the paper this magazine is printed on has gone from \$32 per hundred weight in January of 1995 to about \$63 per hundred weight in January 1996 - about a dollar short of doubling. Advances in computer technologies kill trees - I can think of no innovation that has ever saved one.

We do publish Boardwatch electronically and have since 1988 - in full text. We also pioneered electronic distribution of a national daily newspaper, Gannett New Media's USA TODAY, beginning in March of 1988. Today, we strive to publish the ENTIRE text and graphics of Boardwatch Magazine on our web site at <http://www.boardwatch.com>. And despite numerous queries as to why, we publish ALL articles in their full length, with all graphics we can get to transit the mediums, and strive to not only NOT limit what you can freely see online, but to augment it by making all e-mail references, web site references, and any other type of reference as hot, live, and linked as we can technically make

them. We further index every word of every article where you can search the entire body of Boardwatch for the past year online. We have even recently added a way, to cogently we think, display advertising and link to the advertisers' web pages.

In short, we have worked unceasingly to make Boardwatch not only available online freely and at no charge, but to take advantage of that medium to make it MORE of a useful publication than our printed magazine in some very measurable and definable ways. No teasers. No tables of contents. No element of "you can't have that until you subscribe." And I've been accused of foolishness and idiocy by other publishers, by some of my own staff members, and occasionally by a reader here or there. I've even had a handful of subscribers note that if we are going to make it available electronically for free, they see no reason to renew their printed subscriptions. I simply assume these few readers don't get it, never will, and probably are not a particularly useful part of our reader demographic. In other words, they are not who we write for anyway.

But the overwhelming majority, like yourself, clearly do. Oddly, the number of paid subscriptions to the printed magazine, entered THROUGH the web site, where it is already freely available, continues to climb dramatically to the point where we are receiving an unexpectedly high percentage of our new subscribers through this medium. I can loosely conclude that these people either have made a conscious decision to support our publication in this way in the confidence that it will continue, or that they perceive some value in having it in the portable paper form as well. A combination of these motivations is entirely plausible.

As to the blow-in cards, we've had them, and we've not had them. Boardwatch has never been particularly sophisticated when it comes to marketing itself. For a period of nearly six months last year, we never sent a renewal notice to anyone. We've spent a good bit of effort developing better tools to notify subscribers of impending subscription lapses - almost entirely at the behest of our subscribers. We may be the only magazine on the market with a portfolio of customer service complaints because we did NOT inundate them with renewal notices, and asking that we do so. Frankly, I too find blow-in cards annoying, unless it is a publication that belongs to someone else and I want to subscribe to it. This recently happened to me personally with a publication titled *Cigar Afficionado*, a superb quarterly by the way that has dozens of fascinating articles that have little to do with Cigars. It may be one of the best mags on the newsstand, in my unqualified but nonetheless strongly held opinion. But it had no subscription cards in the issue I saw, or they had blown away or been torn out, and I found it terribly annoying. So we did some in Boardwatch over the past couple of issues and if it garners sufficient subscriptions to be viable, we'll probably continue it. I doubt it will ever be taken to much of an extreme.

Will Boardwatch ultimately devolve to be "just another magazine" in the sense of what we are seeing in the explosion of uniformly

bad Internet books now available? I would that it would not. And as editor and publisher, I do have some influence in this area. The cost of course is that we cannot present ourselves as being all things to all people. Boardwatch represents a particular view of the online community for a particular and specific audience. It caters to the type of reader that is an early adopter, power user, and in fact, to the builders of the online world rather than to the much larger body of casual online users who populate it.

Jack Rickard



INTERNET SERVERS

I consider you to be the most qualified person to answer my questions, so here goes. My school is getting a 64K line installed, and we have no idea what to do. Do we need a server running a program like Spinnaker? All we want to do is post web pages, send/receive email, and allow us students to use newsgroups, gopher, ftp, surf the web and such. My data processing teacher is stumped, and frankly, so am I. This is a lot different from my old BBS sysoping days. Any information you can give us will be greatly appreciated.

Brian Clark
tenor@gnn.com

Brian:

It sounds as if ALL you want to do is just about EVERYTHING anyone would want to do. It's basically an entire operating system. In an emerging area such as this, I don't know that there are any answers, or that I'm particularly qualified to provide them if there are.

I have a couple of recommendations for you to consider. There is a free operating system called LINUX that is a UNIX variant with lots of free software available on the net. It can do EVERYTHING but it is a bit ugly - very character based and very challenging to install and operate. But it can be very educational to do so, costs little or nothing, and might make a great class project. You will need a fairly capable PC to do this, a 486-50MHz with a largish hard drive and a good bit of RAM.

The other option is WindowsNT. This platform is emerging as the new development platform for the Internet and a bewildering array of tools is becoming available for it. It would be my choice for operating a web site, etc. But it is relatively expensive as an operating system.

Either of these would let you set up your own SMTP mail server so everyone in the class can do e-mail, multiple web sites, view newsgroups, etc. The advantage of NT is that a lot is being developed for Windows and Windows in general is very popular at this point. LINUX may be more of a challenge, but it is interesting, educational, and there is a world of free utilities available for it.

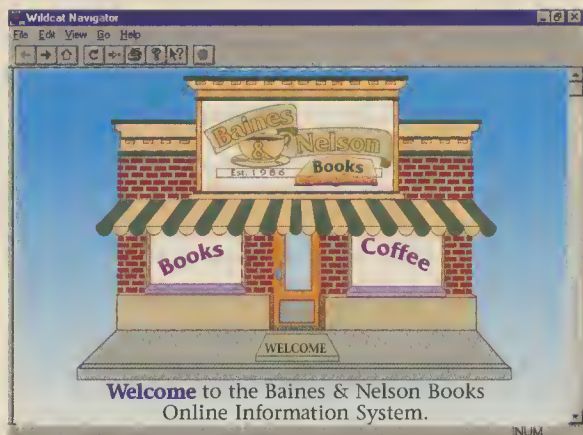
Jack Rickard



Why settle for a you can have the

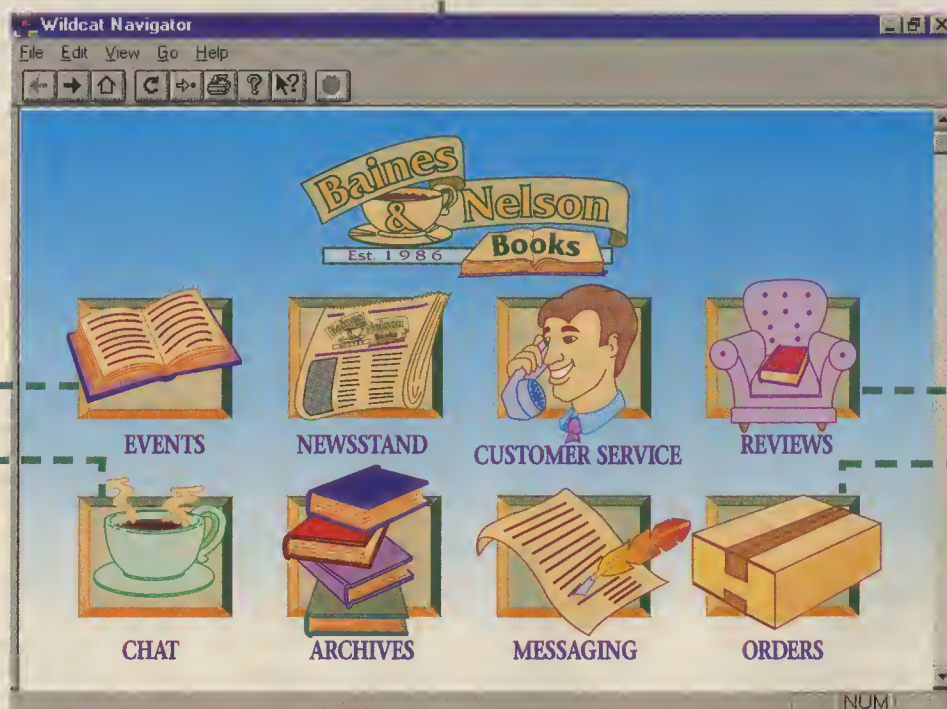
Open up to a new chapter in online systems:

Wildcat! 5 for Windows 95/NT



Customers can check an event schedule for book signings and other happenings using a custom system designed with wcCODE.

A moderated tele-conference system lets Baines and Nelson hold online question and answer sessions with local and celebrity authors.

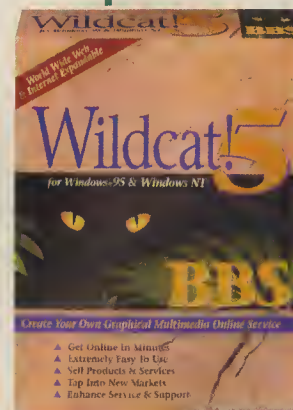


Baines & Nelson created its own book reviews and links to book publisher Web pages right from Wildcat!

Customers can check Baines & Nelson's inventory and order products using the Wildcat! ODBC add-on.

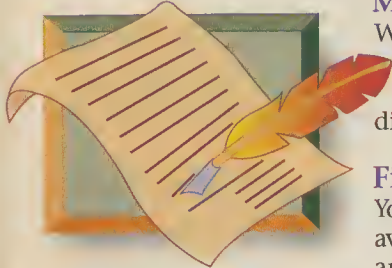
Are you considering the World Wide Web for your online needs? Consider this. A web site is great for viewing documents, but your own online service can give you more. Messaging. File management. Interactive teleconferencing. Data security. Your own online community where members want to visit and come back again and again. But where do you turn to get your own online service?

Turn to the company that's been creating online software not for 10 months or 10 weeks, but 10 years: Mustang Software. Then open up to a new chapter in online systems with the power of Wildcat! 5 for Windows 95/NT. It's a 32-bit online information system that combines the browsing ease of the Web with the powerful features of a bulletin board: the ultimate information server. Wildcat! has the power to provide an online solution for nearly any type of business wanting to get on the information superhighway. See how our fictitious bookstore, Baines & Nelson, uses Wildcat! 5 to create its online presence.



Wildcat! gives your members access to information through modem, LAN, WAN, and the Internet.

few pages when whole book!



With Wildcat! Baines & Nelson's customers can send and receive e-mail quickly and easily.

Message Conferences

Wildcat!'s message conferences are similar to forums found on the larger online services like CompuServe. Each conference can have its own message base, files, bulletins, questionnaires, display screens and menus.

File Management

You can make documents, spreadsheets, databases and other files available through Wildcat!'s file management system. Searching and retrieving are as easy as pointing and clicking on an icon.

Security

Wildcat! gives you the power to define exactly which files, messages, and menu options your members can access. It's ideal for supporting different departments, offices, and even entire companies.



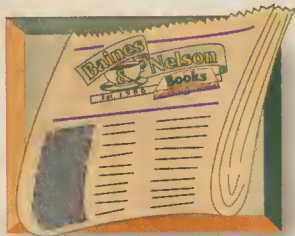
Search Baines & Nelson's archives with the Wildcat! file management system.

Free Wildcat! Navigator

The free Wildcat! Navigator gives your members access to services through modem, LAN and the Internet. Its point and click operation lets members browse your online service by selecting hypertext regions and icons.

World Wide Web Interface

The key to Wildcat!'s ease of navigation is its use of hypertext markup language (HTML). This is the same language used to create pages on the World Wide Web. Future versions of Wildcat! will include support for full-motion video and Virtual Reality. With the Internet Connectivity Package, members will even be able to navigate the World Wide Web through your Wildcat! system.



Using the included HTML editor, Baines & Nelson easily creates news pages and bulletins to keep their customers up to date on bookstore news.



Baines & Nelson expanded its customer service lines to include 24-hour contact via e-mail and real-time access through Wildcat!'s chat system.

Teleconference/Chat

Wildcat!'s real-time teleconferencing provides an exciting way for members to interact one-on-one or in groups. Moderated chats give members an organized forum for group discussions or question and answer sessions.

Polls/Questionnaires

One of the best ways of gathering information is through Wildcat!'s questionnaire interface. It's powerful and flexible enough to quickly gather demographic and marketing information and even process online orders.

So why settle for a few pages? With a world of connectivity and powerful options at its disposal, Wildcat! is truly the online solution for your business. To experience the Baines and Nelson Book Store for yourself, download the Wildcat! Navigator from Mustang Online. You can reach us at telnet://bbs.mustang.com, http://bbs.mustang.com, ftp://bbs.mustang.com, or through modem at 805-873-2400. If you'd like to discover how Wildcat! is creating online solutions for companies, call our Solutions Office at 1-800-807-2874 for a free consultation.

Wildcat! 5 Add-ons:

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- Internet Service Provider Package
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WINDOWS NT VS. NOVELL NETWARE

Dear Jack,

You may not remember, but we met at Aquila's first internet seminar last January. Chris Babb suggested I drop you a line in regards to the following:

While seaching for information on the Windows NT vs. Novell NetWare I came upon your April article "Windows NT - for Real?" After reading it I thought you might be able to give me your latest opinion on the future of Windows NT client based network vs. Novell NetWare 4x distributed database service?

Additionally, will Microsoft chip away at Novell's market share and over take it as the leading network operating system? Or are they two different systems made for two different markets?

Thank You for Your Help!

David Smith
david.smith@aquila.com

David:

Your asking me to read messages from God in cloud formations. But here goes...I'm seeing a move toward NT at all levels, particularly in the corporate markets Novell has so long dominated. I guess I see NT completely displacing Novell and a poor end for Novell in the long run. That said, it might be a real long run. There is a huge installed base of Novell sites. There are probably 6000 consultants in this country that make a living installing and maintaining Novell networks. It will take a long time to die. But I guess the NT "replacements" I've seen in some organizations have been sufficiently successful that unless Novell does something grandiose, they are going to go the way of Banyan Vines, Arcnet, and other well deployed products of the past. They have sold off their UNIX and are selling off their consumer software such as Word Perfect. They have had significant losses of talent in recent months. They probably don't qualify as one of my top stock picks at the moment.

We run both Novell and NT concurrently here to some success and I would guess there will be some side-by-side activity for some time. I like the Novell network we have, and don't see losing it anytime soon. But I think it is from familiarity, and starting from scratch today, I might go for the Windows scheme.

If you are starting from scratch, go with NT. It's where the future seems to lie in building networks.

Jack Rickard



LAPTOP CONNECTIONS

Dear Jack:

Your article "Laptop Phone Home" was timely, it may enable my department to get the information it needs while in the field.

Currently the only outside access to the system is a 14.4k modem connection to the

UNIX system set for VT100 emulation. We can read and edit or send new mail, or generally do any function we have access to on our terminals which is TEXT based.

My questions on connectivity are thus.

Software to create a SLIP/PPP modem connection to our network may be installed on the network "it hasn't yet", would that be a redundant or wasted effort if WIN95 was available on a PC connected to the network and used as a modem gateway?

Do you have to make an Internet connection in order to share drives and files with LMHOSTS or can we use a dial up PPP modem connection directly into our network?

Your article seemed to indicate that internet accounts were portable or at least accessible around the country. Are They? I am not familiar with the larger internet providers, do companies like AOL, COMPUSERVE, or PRODIGY have access points around the country that allow a local log in? If that were available, it might be more economical to pay for an account with a service that to pay the long distance charges to make a direct connection to the office.

Our goal is to be able to have the same information that is available on our networked desktop PC'S available on our laptops.

Any help, advice or suggestions on software/hardware you can offer would be appreciated.

Joe Dora
O.E.M Sales
Tridelta Industries
Mentor, Ohio 44060
joe@tridelta.com

P.S. Colorado's part of my sales territory, had the pleasure of visting your fair state. "Nice Place" airs a little thin for us flat landers though. Notice that John Dvorak seems to enjoy some fancy dinning, if he's ever out your way ask him to check out the Denver Buffalo Company, the buffalo ribs taste great! We won't mention the rocky mountain oysters<grin>.

Joe:

Windows95 and WindowsNT do have some direct dial capability. This comes with the bonus pack for Windows95 and is part of WindowsNT. It is referred to as Remote Access Service or RAS. This would allow you to dial in directly and share resources the Windows way. But it would not necessarily do the Internet gateway thing.

The advantage of the Internet connection method is that you can dial from anywhere that you have access to an Internet account. Many providers such as Netcom, PSI, UUNET, etc. offer true PPP/SLIP service from hundreds of locations around the country. You basically get a list of local telephone numbers from them, and whenever you travel, you would have to look up the nearest local POP number from the list and change the number in your dialing item. From ANY port on their service, your account and logon looks the same. In this way, you can access the files

on your desk from any place with a local POP on your service. I think CompuServe offers a similar service. AOL doesn't actually provide a true PPP account but more of an agent to the Internet that does not allow many software programs to work. IBM has a national network. CompuServe does. PSI and Netcom have a pretty good network.

Another almost blasphemous, for me, thought occurs to me. Right now, you have a single 14.4 kbps connection available in your office that doesn't do what you want it to do. But your office is connected to the Internet with a T1? Obviously you could put in a bank of three or four 28.8 kbps modems, perhaps even a couple of ISDN lines, so you could dialup from home. But at this point, it almost devolves to "why bother?"

Essentially unlimited dialup accounts are commonly available from Internet Service Providers for an average of \$21 per month. For some companies, it may make more sense to connect the LAN to an ISP with a T1, and then have everyone dial the ISP for access to the LAN via the Internet - from any of the ISP pops. Then you have NO modems, and no worries about upgrading them, moving to ISDN, etc. That is the worry of the ISP.

The question boils down to can you install, maintain, and upgrade a modem bank for your employees at less than the cost of getting the service from an ISP? Windows really doesn't care.

I prefer the Prime Rib. But yes, it's great.

Jack Rickard



I'M NOT A SALES PITCH! Read me when you have time :-)

Jack-

As per your last issue I noted that you guys are receiving an inordinate amount of junk mail, so I won't expect any kind of reply for a couple of years since you're having to parse through all of that crap to get to my wonderful little message :-)

But anyway, I'm writing for three reasons. First of all great story on the Ascend 50, those things are wonderful. Sure enough they are hard to configure as you made note of, and being one of those original netters from before the net.boom I have that whole complex of "it should be hard, so as to keep others off the net" hehe.. But to be honest, I just wanted to tell you that you are quite correct, it is a wonderful product, and I'd recommend it to anyone wanting to get up and running on ISDN (well a LAN customer), as for the individual I'm recommending Ascend products right now.

Just wondering if you'd managed to play with the USR 33.6k's as of yet? We are now a 100 line system with 1100 users, but here's an interesting brief as to how we got here. We were running 50 USR 28.8 Sportster's, happy as can be, with 2 Livingston Portmasters. We go to add more lines, including getting our 3rd Livingston, and come to find that the USR 28.8 Sportsters are no longer in production, "33.6k" is here. Boy, that turned out to be another V.FC-type

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piece of crap! Users would connect and login no problems, then it would just disconnect shortly after. I tried Everything including disabling the new 33.6k stuff. No go, so word to the wise, avoid 33.6k for the time being (ISDN is getting so cheap anyways 33.6k is a waste of time). So we managed to find Cardinal 28.8's, we played with a few, and now we're 50 usr 28.8's and 50 cardinals with 4 Livingston Portmasters, the 4th having 2 of Livingstons new BRI ISDN cards. All is great in the world of the net around here. So I ask you, should 33.6k even be messed with? Shouldn't everyone just focus attention on ISDN? The world between 28.8k and ISDN is tremendous as you mentioned in your feb ascend article, and the pricing is shortly becoming a non-issue.

By the way you might make a note in your next editorial to anyone starting a new ISP: Buy modem racks. Here we are with 100 individual modems and POTS lines and it's disgusting. We're looking at several products to implement T1 channelbanking, specifically Ascend's MAX 4000 and USR's Total Access products, but it's a word to the wise! A review of the various Modem rack/T1 channelbanking solutions for incoming analog lines/products would be very nice if you or gary could swing it!

We recently have been looking into methods of setting up a POP. Before my idea of doing it was to run a T1 to the site of the POP, plug it into a Livingston PM2eR with an integrated WAN port, and have a 10 20 or 30 line dialup. But as of late I've learned the phone company can use it's existing technology and they just charge you for a T1 and then you just need a multiplexer to break down the lines on your end which you plug into your existing equipment. Much easier to pull out of a site, plus all maintainance is at home, and you don't have to find a site to locate your equipment at the remote site. Also it allows you to more easily mix and match those lines with your local lines as far as equipment goes. I'd considered this method before, but now that I can do cost and ease of use comparisons..

Kudos on BoardWatch, it's really become a success. I've been with you since '92 as a reader, and as you know I attended BBSCON in 93 at the wonderful age of 15 with the RemoteAccess team, then spoke at BBSCON's '94 and '95 at the ages of 16/17, and in that time BoardWatch has changed it's looks, but your editor's comments in the opening keep BoardWatch just the way I like it, and your beefy-technical articles are what keeps me and your others coming back. You always are exactly in sync with my feelings on topics, and you take the realist approach/devils advocate. Keep it up my friend, and should you ever enter into politics (hehe that would be a sight ya know it, I picture you as the anti-christ politician of technology somehow) you have my vote Jack!

You know, after my experience with computers, when I get out of college I want to be a forest ranger away from it all! The only technology I ask for is a hand-buzzer to screw with the bears.

Josh

P.S. - If you get a chance as well, could you provide me with a little insight on your thoughts of there being some big bang that makes ISP's obsolete? (the techie's will never be obsolete, I just think it'll require the 'big boys' hiring sysops and us unix admins to run things like you've always said). But then again, there's a customer service angle that I think the big boys may never be able to provide so maybe ISP's will never disappear. My saying is that you have to be the disney world on the information ***** (censored to protect the innocent), and not just a toll booth. In other words, setup a kick butt web site.

Overuse of domain registration and e-mail aliasing at it's best:

josh@inf.net
josh@kc.net
josh@never.com
josh@josh.net
josh@jayhawk.net-

Josh Heizman
System Administrator
InfiNet Online
<http://www.inf.net/~josh/>

Life is a test, only a test. If it were real you would have been given instructions about where to go and what to do..

Josh:

It sounds like your BBS has grown to quite an Internet Service Provider business. No, we have not looked at the USR 33 kbps units as yet. My sense is that the perceptual difference between 28.8 and 33.6 kbps will not be sufficient to warrant the standards issues - but some of these speed issues will fool you. It's not purely a function of arithmetic. Some speed increases cross certain thresholds of human perception. At this point, I would guess 33 kbps does NOT cross one of those.

ISDN certainly holds technical promise for future development of a low-cost link at some useful speed and that was what our Ascend article was trying to point out. The difference between 128 kbps with 4:1 compression and the 1.544 Mbps T1 speeds without compression is not particularly important to individual users - at least for web browsing. The problem is that ISDN is an infrastructure issue held hostage by the telcos. It has become obvious to them that they cannot alter the service model of essentially flat rate pricing on the Internet. Marking ISDN as the next useful frontier, they hope to deploy penny-per pixel pricing meters to THAT instead. In this way, they would attempt to drain the money from the Internet into their own coffers and get the metered measurement cornucopia they presume they so richly deserve. US Worst and Specifically Belled have both attempted to DRAMATICALLY raise the price of flat-rate ISDN - in the case of U.S. Worst from \$63 per month to \$184 per month while dangling more reasonably priced alternatives WITH measured service rates.

ISDN deployment and pricing is a total case study in why the regulated monopoly half of our telephone experiment, begun with divestiture in 1984, is simply a failure. These companies have turned into a welfare jobs pro-

gram for white collar workers and have attracted the worst of the worst. But they should by rights be the keepers of the line infrastructure that access to anything depends. The fact that hundreds of millions if not billions of dollars has been spent in increasing analog modem speeds from 300 bps to 33.6 kbps is a towering monument to the failure of our telephone system - which always could deliver much higher data rates. With a working telephone system, 155 Mbps service to the home for less than \$30 per month is entirely feasible and it is my position that had we had a competitive local loop since 1984 we would have had it five years ago.

ISPs have an almost universal fear that the telcos are going to come take this business away from them. I have said it in black, I have said it in white, and I have said it until I am blue in the face - it cannot happen. Economically it could happen. Technically it could happen. But culturally and organizationally it simply cannot. The local RBOC as we know them cannot for the foreseeable future deliver this service in any meaningful way. That they posture endlessly at this point that they can and are about to is annoying as hell in that the Fear Uncertainty and Doubt (FUD) factor they foster prevents true entrepreneurs such as yourself from making any long term investments - shackling effective Internet access to a cottage industry that cannot deliver the infrastructure portion of the equation that will give me faster connections at lower prices.

Cable television is making some more interesting moves. Motorola has just sold some 350,000 units of their CyberSurfr cable modems to three of the larger cable television companies, most notably TCI here in Denver. But they've immediately run into some of the same problems - how do we hook these into our customer's computers without delivering a graduate course on technology to get it configured and operating. The cable TV culture is more entrepreneurial, but their concept of customer service is to statically and geographically map customer complaints - literally on a wall map - to isolate problem hardware. Since the early '80's they've been infamous for providing a single customer service - a busy signal on their customer service telephone line - which is quite separate from the line used to ORDER cable service. Installation, of course, can be quite prompt.

TCI also had an earlier data attempt at distributing a one way loop of about 10 MB of stock and news data over the existing network, again with a proprietary modem, that failed rather badly. It was titled Xpress and they actually advertised it in Boardwatch one month in 1988 or 1989 as I recall. It failed horribly. After years of availability, about 350 people used it nationwide - and that apparently briefly in each case. I recall even investing an hour or so talking to their people at the time in an attempt to show them how it might be made to work popularly and was assured they really already knew everything in the world about everything. Not being one to cast pearls before swine, I've been somewhat comfortable in allowing them to continue in their profound and all encompassing ignorance of the online community for a number of years since despite their proximity about five miles from the Boardwatch offices.



128K BPS SATELLITE DATA



In addition to our 19.2K satellite data delivery system, Planet Connect is now delivering data via satellite at 128K BPS.

This state of the art system can conserve your Internet bandwidth or almost eliminate your long distance phone costs. Both systems offer a wide variety of data but the 128K system has the bandwidth to deliver a full Usenet feed. Here are some of the features of the 128K system.

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To not be obsolete in the near future our system can be instantly switched to 256K when new bandwidth is needed in the future. Two separate independent data outputs also allow special isolated data feeds.

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Over 18,000 different news groups including all binaries in these groups. NO EDITING OF MESSAGES. Our news feed is passed to the satellite uplink as soon as the messages are received from the Internet which provides a near real-time feed to each satellite receive site.

REMOTE ADDRESSABILITY:

No software keys or dongles required. Independent programmers are encouraged to develop specialized receive software for this system. No call-in resets required when your subscription ends. You can pay your subscription monthly, quarterly, or annually.

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Each byte is transmitted twice to allow forward error correction of the signal. This results in very few reception errors that might result in lost files.

AUTOMATIC SIGNAL TRACKING:

The system uses multiplexed satellite SCPC signals which carry a special tracking signal. This special signal allows the data receiver to track the satellite signal resulting in a low error signal when outdoor temperature extremes usually cause antenna amplifier frequency drift.

In addition to our Usenet feed Planet Connect can supply your BBS with several high quality data services. Here are some of the services that can turn your BBS into a popular on-line service.



UPI NEWS AND PICTURES

Now your BBS can offer real-time news and information from one of the best known information providers in the world. UPI reports the national news as it happens and we transfer it to you via satellite. The complete text and pictures from UPI will give your BBS an image based system that will draw in a huge audience of new users.

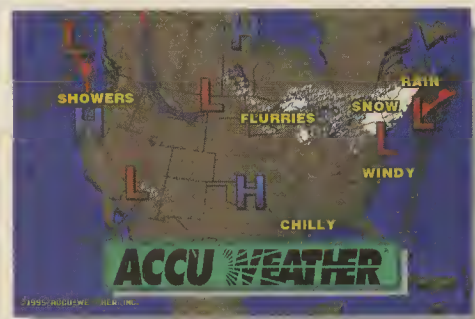
STOCK MARKET AND FINANCIAL DATA

Surveys have often proven that financial data is number one on the list of data services that BBS callers are trying to find. Your BBS can now offer data from the major exchanges with hourly updates and closing prices. This service is very reasonably priced and allows a variety of display methods.

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You'll forgive me if I can only treat the threat of cable television dominance of Internet access with some bemusement.

I cannot promise you there won't be some "big bang" making ISPs disappear Josh. There is money in the Internet now and every company from AT&T to Microsoft to IBM to U.S. West desperately wants you to believe that they, and they alone, are THE INTERNET COMPANY. Netscape, with never as much earnings as Boardwatch, released a scant 13% of their ownership in a public stock offering and the stock is currently trading at \$160 per share - a valuation based entirely on the perception that they are really THE INTERNET COMPANY. There is a tremendous amount of resource, motivation, and in some quarters hysteria being deployed to gain control of this network. But there has been for a couple of years, and in the face of that, most of us get our Internet access from what was a handful of tiny companies. That handful has grown to over 1400 in this period, and new Internet Service Providers come online daily - almost all still tiny companies. Their margins, and their concept of business, is such that a large company can't even have a meeting about them profitably. If one of the giants can figure out a way to provide higher bandwidth at lower cost, they will undoubtedly prove popular. But I can tell you they do not seem to find the \$21 per month average cost of Internet Service (coincidentally within a few pennies of basic cable television) at all attractive in a competitive environment where even that price is not literally guaranteed by government fiat. I rather suspect that a cable company could make this a very popular add-on at some price, but I rather gather they will trip up on their own greed along the way and fail to do so. Long distance carriers such as MCI and Sprint could if allowed to provide local loop services, but they can't at this point and again, they are not attracted to the \$21 or lower rates. The bottom line is that it is up to you to build the Internet Josh. You'll hear every day why it can't be you, why it shouldn't be you, and why someone else is going to take it away from you. But if it gets built, you're going to build it at the customer end. I would predict 2000 Internet Service Providers by year end.

Jack Rickard

First of all, if your magazine ever stops publishing I'll be forced to call Dr. Jack Keivorkian — for myself.

Second, David Hakala is incorrect when he states in your February issue that, "You can view but cannot download the GIF files" at the U.S. Postal Service Web Site (<http://www.usps.gov>).

Fact is, you can download any graphic at any site on the Internet using Netscape. Just click on any graphic with your RIGHT mouse button. A window opens that lets you view the image larger or download it to your PC.

If you're into collecting web graphics, this is a wonderful Netscape feature.

Rich Orloff
orloff@injersey.com

Rich:

I heard on the morning radio that Dr. Jack has been found with the goods in his trunk. I've never understood his role, but I've always been kind of a do-it-yourselfer anyway so it is.

You are quite right and thanks for the note about Netscape. Right mouse click gives you any graphic image you can see. I'll sentence our esteemed editor-at-fault to ten laps about the web for his transgression.

In fact, there are two features of the World Wide Web I find just fascinating. You can view the source of any HTML page and you can also retrieve these graphics. This fosters theft and plagiarism, from one point of view. But it seems also to be a function of the web that you can't really steal anything without making a few improvements of your own. As a result, there is a kind of fascinating pooling of techniques that uniquely makes the development of a kickass web site a kind of escalating weekly battle leading to better and better looking web sites. This resembles nothing so much as a boiling cauldron of creativity with a lot of individual participants. I rather expect some shocking, and perhaps genuinely NEW things to come out of this global collaboration - assuming some intellectual giant from our judiciary doesn't find a way to kill it first.

Jack Rickard



FREE EMAIL TO FAX UTILITY

Jack;

Further to the capability to use the Internet to circumvent long distance costs for email communication is a service I recently heard about but haven't read about it in your magazine.

The essence of the utility is that an email message travels to its destination by the Internet and then gets converted locally to a cover page and message page and then is transmitted to a traditional fax machine via a computer and a local (nominally free) phone call and all this for free.

One simply addresses the email as follows: remote-printer.fax_recipient@phone_number.iddd.tpc.int and then with little other complication sends the message. Variables including fax_recipient and phone_number must follow some easy rules but the whole endeavour is really quite simple.

Apparently, this non commercial service is experimental and is available in many areas of world including all of Australia, Hong Kong, Toronto, Ottawa, Tampa plus many more areas. Some are large, others small. Many other areas are not served so it is not (at least yet anyway) a universally available service. They do have a nice test facility permitting one to enter a target fax phone number and obtain immediate feedback whether the number would be served.

An associated Web site is www.tpc.int/ which can provide considerably more information. This should not be confused with Faxaway or

other commercially available (ie charging) fax services. Perhaps you or a designate could investigate further and report back in the magazine.

I would appreciate an email reply to this message with some indication whether this warrants further immediate research or otherwise. Thanks in advance for your co-operation.

Dave Wilson
Barrie, Ontario, Canada
ddw@bconnex.net

Dave:

These are generally referred to as Internet Fax Servers and we have indeed covered them in Boardwatch, a number of years ago actually. But you are quite correct in that we haven't covered them recently and they are of some interest. I have not found fax transmissions terribly expensive even when dialed directly. Even in the case of International delivery, the fax software now a part of the Windows95 operating system makes it terribly easy to just send a note from your PC to a fax machine anywhere and it almost doesn't warrant the complexity of using the fax servers. We're talking a dollar or two. But for some regular fax deliveries, perhaps an International fax newsletter or mailing list, they do have a certain potential. I guess I just never really get the feeling of assurance that the fax really arrived at its destination and the complexity doesn't seem to justify the cost savings. But it is an interesting experiment.

We are starting to see some more interesting developments in VoN or Voice Over Net. Individuals in various local dialing areas are volunteering equipment and connections to bridge the new voice over Internet products such as VocalTech's Iphone to the conventional voice telephone system. If this matures, you may soon be able to not only place voice calls over the Internet, but actually make voice calls internationally that terminate in a normal telephone anywhere. I'm so fascinated by this that I'm trying to get Jeff Pulver, who runs a mailing list and really a pretty good electronic publication on the topic to join us with a regular column on voice comm over the Internet.

Jack Rickard



Hi Jack,

Just a note to say how much I enjoy reading your magazine. I found the magazine invaluable for information prior to and even more so now that I have set up a BBS for our company.

However, although I have only been reading your magazine for almost a year now, I have seen more than one article on Excalibur (which is still in beta) and never an article about PowerBBS (software I run), which to my knowledge was the first Windows based BBS package.

I would like to see an article comparing WorldGroup, Excalibur, PowerBBS and the new Annihilator from Mustang if possible.

Keep up the good work. I like the focus shift towards the Internet and WWW.

Adept Communications



ROSS HAMEL

The Swords of Chaos: is an addictive game on a titanic scale. Beginning in a city the theme is "gang warfare" with fiercely protected territorial rights. The Sysop has the ability to build the game further, adding rooms, items and NPC's. Up to 10,000 new and exciting areas can be added to the existing world. Sysop abilities are extensive and the interactive help system will get even the newest gamer going.



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Bruce:

And what would we use as the basis of comparison? The development of communications software is essentially in every direction at once. They are almost operating systems. Mosaic was a minor backwater a couple of years ago with no comparison to existing terminal programs. Today, Netscape dominates the online community almost totally. Realizing this nearly ten years ago, I've never expended much effort on comparative reviews and am probably loathe to do much of that today with the exception of the occasional comparison between two or three products concerning a SPECIFIC feature.

Excalibur has hardly been long lauded in Boardwatch. The program was in beta so long we finally assumed beta meant released. The author was certain we hated them and would never cover it. It was never so, but it was his feeling in any event. Jim Thompson and David Hakala looked at it and loved it and an article ensued.

I did download the new WildNAV from <http://www.mustang.com> the other night. They have a pretty good start on a web browser there that also dials bulletin boards directly, and can functionally deal with such things as caller management issues, message conferences, electronic mail, chat areas and file areas in some very interesting ways. There were 58 people "ON" their annihilator site at the time and I find the concept engaging. WorldGroup has struggled of late, but we continue to follow it with interest. MindWire seems to be gaining some momentum in some circles and we could drop a PowerBoard review in here at the drop of a hat. I'm convinced the Web needs some additional work on tools and the basic DNA of online life, and couldn't tell you at this point who is going to develop what in what direction.

We'll try to be on top of it, as always.

Jack Rickard



FUTURE OF BBSS

Jack,

As with most letters to the editor, I have read in your magazine, I will have to say what a great resource it is to have. I was reading January's 1996 issue, and as a sysop running a primarily dos based system with only ANSI graphics to satisfy my users. I am wondering about these client/servers and all the systems adding Internet access. I see the fresh look of the graphics, the great features they offer for WWW support and so on. But when will the great revolution take place? Many boards already run on client/server systems, offer SLIP/PPP access. But will the dos based renegade type BBS system always be lurking?

I have been working with computers for a few years now, and will most likely major in com-

puter science in college. A few months ago I just told people I would be working with computers as a grew older. But there are so many fields to go into. I would like to run an online service for profit but that seems to be filled up with many bigger boards. Perhaps I am looking for a few recommendations on what jobs the future might hold.

Nathaniel McMullin
mcmullin@ix.netcom.com
Cyberia Systems 860-228-9814

Nathaniel:

The DOS-based Renegade-type BBS system will probably be lurking for the rest of our natural lives. But I see no further momentous developments in this area and look for it to devolve to something very similar to the HAM radio hobby today. The future of bulletin boards is on the Internet with graphical client/server type systems with more video, more audio, and perhaps digital odor peripherals.

There are indeed a lot of fields to go into and you probably won't go wrong with any of them. I see a rebirth of the badly besmirched artificial intelligence field coming hard this way. I think digital video editing and production technologies are just going to go off like a rocket a year or so from now - and I think even the entertainment industry will be profoundly altered when they learn digitally produced Avatars work a lot cheaper than actors and ALWAYS show up on time for filming - Toy Story just the tip of the iceberg. Animation and graphics will naturally be a part of this.

There are some fascinating challenges in how to digitize and store the last fifty years of video and movie data in a way where anyone can randomly access any of it - storage, compression, and delivery issues. I should like to review all the television news stories on the Gemini VII space launch this afternoon if you please. It shouldn't be much or too difficult to find, eh? So the technical elements of the library sciences should just be a booming career field.

Marketing Data mining - amassing vast quantities of consumer data and cutting and slicing it ever finer to develop more targeted audiences for marketing and advertising will become even more gargantuan than it already is.

Graphic Information Systems or GIS is already pretty big. But digitizing the data to show where all the sewers, fiber optic lines, telephone lines, electrical cables, etc. are in this country and being able to locate and use this data already is important. More exotic presentations of the earth itself, environmental modeling, satellite imagery, and so forth are going to grow further.

Looking out a bit farther, I also see a huge resurgence in the interests of robotics and more particularly androids. I know this is terribly out of fashion at the moment - similar to the AI debacle of a few years ago. But I would find it fascinating if U.S. Robotics actually wound up producing one after naming their company after Heinlein's fantasy, and I would think interest will hit about the

time you would emerge from a four or five year course of study.

Optics is going to be huge as well. Computers driven entirely by light pulses with no electronics involved at unbelievable speeds. The development of the optical switch at BellCore will in retrospect be viewed as one of the giant leaps of the latter half of the century with crystalline computers storing billions of terabytes of data and operating at hundred Terahertz speeds emerging from this - twelve or fifteen years from now.

Finally, you can't go wrong with weapons of war. I think there will be some technological developments that move us away from mass explosives toward more precise and terrible methods of destruction and it should be a huge career field again. War has been so prevalent throughout history I have come to the conclusion that it must actually be a fairly imperative survival mechanism of the human species. If you want to be entertained by a guess, I rather think it exists solely to dynamically assure genetic mixing - the physical travel of DNA between tribes and locales so we don't all wind up three foot tall and fascinated by toys. I see a big one coming our way within ten years and the development of beam weapons almost inevitable.

Jack Rickard



THE AGONIES OF WIN95

Thanks for sending me the complimentary copy of your magazine. I mailed the subscription check today. I've been reading your magazine for about 2 years I don't know why I never got around to subscribing!!

On another Subject: THE AGONIES OF WINDOWS 95. Don't get me wrong - win95 is a great joy, when, AND ONLY WHEN, it works. When things go bad, however, it is nothing short of a foretaste of hell!!

The other day I had a most regrettable encounter with the (missing and or faulty) system registry files. I tried restoring them from my backup tape but learned that the backup done in windows could not be restored with the DOS software (from the same manufacturer, mind you).

After reading your very helpful and informative articles on WIN95 setup for the Internet, I have a suggestion for a future article from you folks:

The Care and Keeping of Windows95, including:

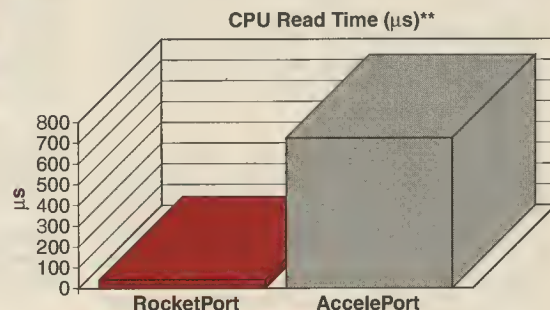
1. A list of all critical files, their locations and what they do.
2. Suggestions for handling DOS. In working on my PC, for example, I learned that the only way to gain access to my CDROM in DOS was by using the old config.sys and autoexec.bat files. IS their a way around this?

In closing, give yourselves a pat on the back. I have found your coverage of Windows95 to be much better than all of the other magazines and books on the market. Everyone else gets distracted on the "gee whiz" factor of the

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** Measurement based on driver call times.



whole situation and fails to adequately cover the technical details that many of us need.

Kelvin L. Barnes
kbarnes@maestro.com

Kelvin:

Adopting any new operating system is going to engender a certain dislocation of psyche. Hell, I can't change word processors without angst. But Windows95 sucks a lot of utility into the operating system and we found it most notably equipped for communications far beyond what we had been led to believe. So we're pretty excited about it.

Frustrated? We're trying to provide detailed procedures for an operating system that looks entirely different to everyone on each different machine based on what was installed or not installed ever before. It is agonizing work to discern the "common" thread path to assured success and frankly we are failing around the edges - though our procedures seem to work for the core of the body politic that tries them. It is enormously frustrating.

On specifics, there is always a backup for the registry files IN the Windows directory itself. I still rather make one manually as well. So you shouldn't need to go to a backup tape to recover. Finally, device drivers ARE the issue with Windows95, though admittedly, this has ALWAYS been the problem with operating systems at every step. Think of DOS as no more, and try to picture Windows95 as a new operating system entirely. It is frustrating, but it is also terribly capable.

Jack Rickard

WEB LIST

Why have you listed a neo-nazi home page on your web list? With all the truly interesting and informative sites on the internet why give them any publicity?

I am confused by this.

Geoffrey D. Davis
Sales and Service
LanMinds, Inc.
gdavis@lanminds.com
http://www.lanminds.com

Geoffrey:

I too am confused, over your disinclination to allow such sites publicity. Do you WANT them to flourish unnoticed by sensible people? Several anti-racism/anti-revisionist Web sites, including the one in our January 100 list, include pointers to StormFront and its ilk, on the theory that if we look at the Emperor's new clothes we will see his folly.

Suppose some innocent child stumbled across StormFront because his parents didn't know to warn him not to go there? We can't leave the management of our children's thoughts entirely to strangers (much less themselves). CompuServe and the German government couldn't distinguish

between alt.sex.pedophilia and alt.disability.support.sexuality. America Online banned "breast" but missed "hooters." Given the ineptitude of these and other cyberchild development "experts," I consider it a sacred editorial duty to give our readers the means by which to make their own informed decisions.

We also receive so many queries from the general media seeking to do the "hate crime online" story, who have the story written but can't quite find an example of it existing, that I thought we would include it for our journalistic friends.

David Hakala,
Editor at Fault

NETSCAPE & WIN95 FEARS LINGER

You mentioned in your 11/95 issue that the Win95 installation of Netscape ruined some of your MSN setup that you couldn't get back or recover from. I've been reluctant to install Netscape because of that.

What's the follow-up on Netscape install and what do I need to be aware of before installing the 32-bit Netscape?

Richard J. Brooks
rbrooks@cello.gina.calstate.edu
El Cerrito, California

P.S.: Your November 1995 issue on setting up Win95 to use it's own Internal TCP/IP was one of the most useful articles ever published!

Richard:

I'm pleased you found it useful. We've reprinted it in our new Directory of Internet Service Providers available this month.

Netscape basically installed its own e-mail handler in Windows95 displacing Microsoft Exchange quite completely. I'm pleased to report that more recent versions at least ask you if you want this done before it automatically does it. We're seeing no further problems at this point.

I just downloaded beta 6A of the Netscape 2.0 version. The urgency of the requests to register Netscape seems to be increasing. In recent versions they have strong expiration elements where you have to get the new one before a certain date. In this release, you have to go back to their site to complete installation and configuration of the program. But I note they now have a dozen in-house ftp sites each capable of handling 250 simultaneous downloads of the program, and at certain times of the day, you really can't get on at all - some 3000 people simultaneously downloading a 3 MB file. They do appear to own the browser market and they are very gradually bringing control of it ever closer to their home systems. It starts to look like the free lunch program will end here pretty soon. It reminds me of an old science fiction short story, later a movie, by Robert Heinlein if I recall it correctly, titled To Serve Mankind....

Jack Rickard

YOUR FEB 96 EDITORIAL

Just read your new editorial, and I agree with you 1000%!! Keep up the great work, I am going to subscribe to your fine publication RIGHT NOW!

Glad to know there are others out there fighting to keep the Internet free from control by the morons on Capitol Hill!

Best Regards,
Andrew Patrick

CONNECTING WINDOWS 95

Dear Jack

Just to say that the whole of Christmas for our family was ruined due to your November article on connecting Windows 95, the Jack Rickard way. I even forgot to feed the dog on Christmas day. Having lost the connection I had (Trumpet, Eudora etc.) it has taken until now to finally get it right.

And boy! was it worth it!

It's terrific - Microsoft Exchange for the mail, collection and delivery, in a single CLICK. Dial-up connection to do web browsing through either Netscape or Microsoft Explorer in a single CLICK.

Finding the scripting tool and login script was the piece that baffled me. The following may be of some help to readers with the same problem.

(1) After installing Microsoft Plus cd rom replace disk with Windows 95 cd rom again.

(2) Go to add/remove programs in control panel. Click on windows setup tab. Click on HAVE DISK. Click on BROWSE.

(3) In the drives window click on D drive. In the folders window click on ADMIN. Click on D SCRIPT and then click OK.

(4) D:\ADMIN\APPTOOLS\DSCTSCRIPT should now appear in the 'copy files from' window. Click on OK.

(5) SLIP AND SCRIPTING FOR DIAL-UP NETWORKING option should now appear in 'components' window. Check mark this option box and click on install.

(6) From the Start, Programs/Accessories should now contain DIAL-UP SCRIPTING TOOL. Here, at this point, I had to get a LOGIN SCRIPT from my Service Provider and APPLY it to the new connection already setup.

This, finally, automates the connection.

We Irish, as you well know, are not given to flattery. All I can say about your magazine is that its not bad - not bad at all.

Pat Dennehy, Cork, Ireland.
dennehy@iol.ie

Pat:

High praise indeed. I'm pleased we are reaching Ireland in good shape and that you were

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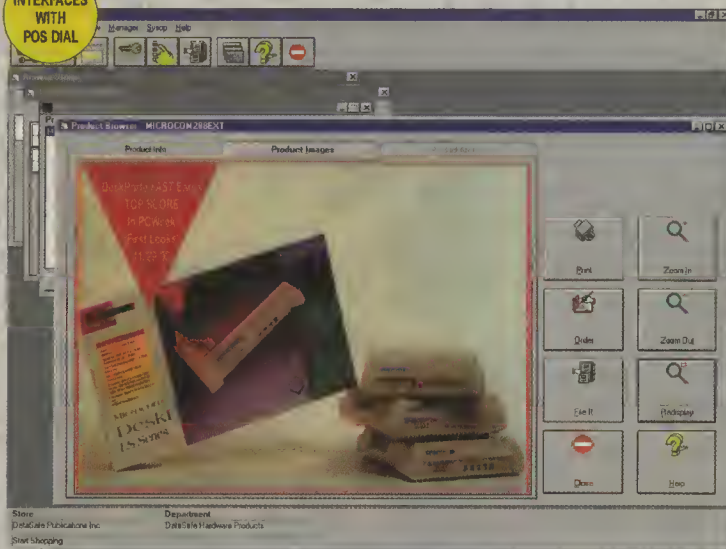
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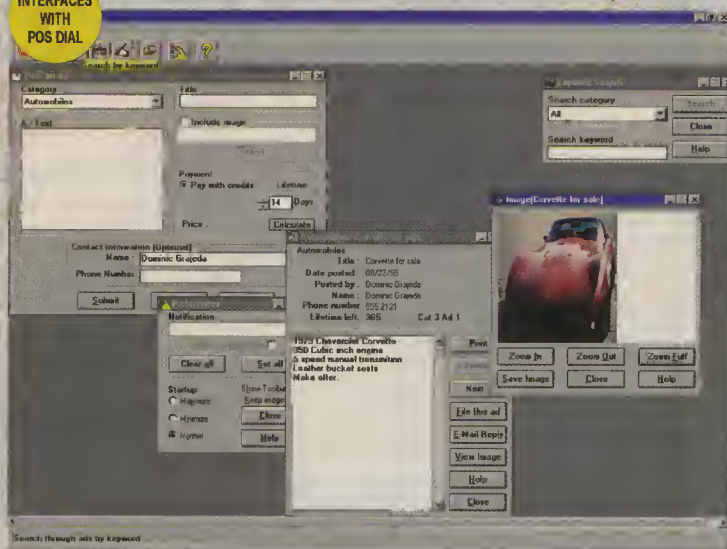
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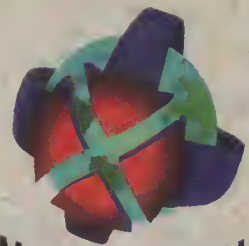
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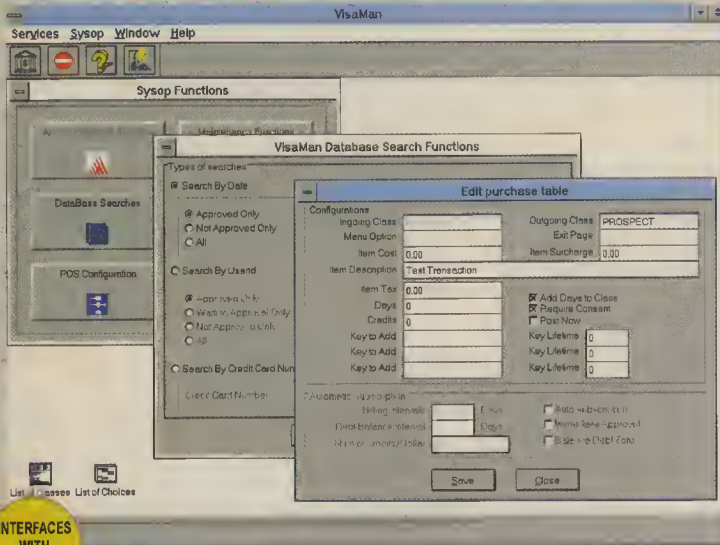


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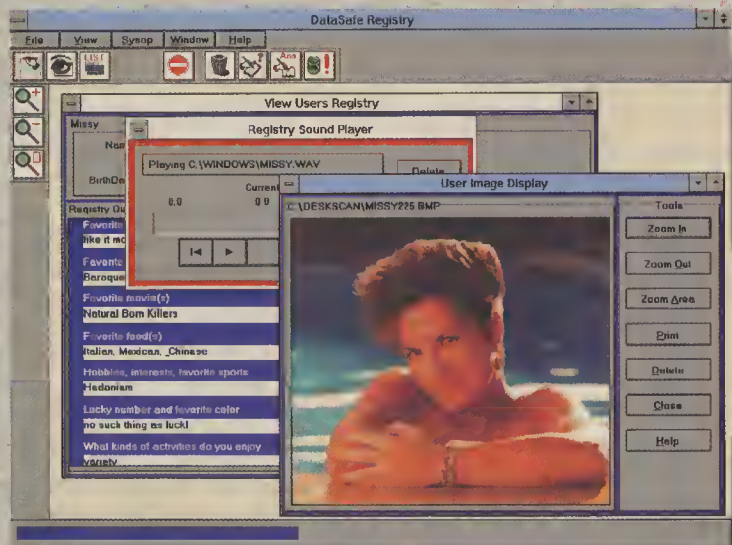
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able to piece together the method in our madness for improved connections. Thanks for the procedural update on SLIP and SCRIPTS.

Jack Rickard



FAULT LINES

It's good to see that someone has an ear for accuracy: Editor at Fault is apt, and Fable of Contents is appropriate to most magazines.

Unfortunately, there is no fault to find, and your fables are true moral tales. Congratulations on a rich and happy mix of useful and personal journalism. I enjoyed the issue, was informed by its contents, and look forward to the next year's worth.

Your site is what every site should be - more than a tease, less than a satisfactory tactile experience. (Handling the detritus of dead trees is the true multimedia experience - it is visual and tactile, and leaves room for Hooty and the Blowfish (or Stravinsky) in the other half of my head.

Thanks.

bbrennan@his.com



YOUR DEC 95 EDITORIAL ON INTERNET NUMBERS

For more days than I can tell you, or care to remember, we were trying to find a definitive source on Web usage numbers and a comparison of methodologies. Then I came across your article. All I wish to say, really, is thank you. I'm in the process of writing a business plan for the Film.com web site, and was quietly going nuts. Now I feel I have a useful resource, and a writer I can look forward to reading again.

Sincerely,

Lucy R. Mohl
lucymohl@film.com

Ms. Mohl:

You are precisely who we wrote it for. A lot of people need some feel for the walls of this universe to make rational business decisions involving lives, careers, fortunes, and futures. They deserve better than some goofy enthusiastic hyperbole and wishful thinking. Truly, I think EVERYONE should be on the Internet. But they aren't yet. And a view of reality, however chaotic, is often useful.

The December 95 editorial does an incomplete and inadequate job of it, but it was our best shot at the time. If we come across anything better, Boardwatch readers will know about it first.

Jack Rickard



GREAT...

Mr. Rickard,

Somebody just sent me your December editorial questioning the numbers on the net. As

someone who has made net number bashing sort of a hobby, I think your editorial is the best thing I've read on the subject.

Quarterman is an interesting guy. About a year ago, I wrote about MIDS and he got a few queries as a result. He bashed me for incorrectly referring to the "Matrix" category as "The Matrix". :-)

Keep up the excellent work!

Robert Seidman
robert@clark.net

Mr. Seidman:

Quarterman is an academic and has his hands pretty full just being Quarterman. He is indeed an interesting guy. The last time we met he showed me a graphic, done in SAS I believe, of a map showing the deployment of something or other on the Internet. It was statistically accurate to the nth degree of course, and he was quite excited about it. So excited, it apparently escaped him that it was so overwritten with plot you could not tell what the map was of, or what it represented, and it looked to me like an utterly indecipherable gob of ink. But he was beaming with pride over it, and I guess, on its own merits, justifiably so.

Po-tay-toe, Poh-tah-toe, Quarterman is not only interesting, but I view him as one of the early visionaries, as unpretentious as an academic can be and still BE an academic, and while I don't recall us ever entirely agreeing on anything, numbers or not, a gentleman and scholar of the highest order. In my mind, he wrote the FIRST Internet book and deserves more credit for his work than he has probably received. But his survey questionnaires are the work of the devil.

Jack Rickard



CABLE REGULATION DIGEST

Hi Jack!

Wasn't sure if you were aware of the Cable Regulation Digest, and since this issue had some interesting stuff on high speed data modems being ordered up by the cable industry, thought I'd forward it along.

I'm generally a quietly lurking reader of your great publication, but thought I'd take the time to wish you a Happy New Year and continued success.

Your article a few months ago on setting up a web server under NT was quite inspiring and has prompted me to get on the long learning curve towards the eventual integration of my bbs (Amocat, 206-566-1155) into the Internet. Currently it's uucp connected only.

For folks like myself with no experience with NT (I've been an OS/2'er for years, but feel it's destined to an eventual place in the Betamax Hall of Fame), I'd highly recommend the book Mastering Windows NT Server 3.5, by Mark Minasi et al (40 bucks from Sybex). Mark has the same gift you do in writing in a style understandable by humans, and makes sense out of the seemingly senseless.

Looking forward to more great Boardwatch articles in the future...thanks again!

—Rich
rich.langsford@tacoma.com

Richard:

I would like to thank you for the pointer to Cable Regulation Digest. It's a treasure. I've joined the mailing list (mailto://listserv@netcom.com. Subject: ignored. Body of message subscribe to cablereg-l) and look forward to this weekly update on what cable guys think like. They also have a web site at http://www.vortex.com/pn/Cable1.html

Mr. Minasi sounds like one of us as well. We'll see if we can get him in OUR book on a regular basis.

Jack Rickard



INTERNATIONAL INFO...

Hi there. Have been a loyal BW reader/subscriber for 3 years now, and have enjoyed seeing the mag progress with the times from a largely BBS-centric pub. to a largely Internet-centric pub, which of course follows the global trend! I read each issue from cover to cover, and enjoy your grasp of latest and greatest gadgets and technology, and appreciate the fact the Boardwatch shares its own Internet setup info with the world.

The reason I write this day is about resources for information about the Internet and POPs in Europe and the Far East. I am interested in exploring the telecomm. infrastructure development of these countries, and learning what's out there, and what there is a need for. Can you direct me to some resources that exist on the net or at my local library? Any ideas you have would be greatly appreciated. I realize the just the regulatory issues alone are monumental, but I sense that there is a need or an opportunity to get some more areas of the world online, and would like to explore how to do it.

Keep up the great work, and you have my permission to use this letter in the mag if you so desire.

Take Care Jack,

Dave Warner
dwarner@netrail.net

Dave:

We recently found a fascinating Web Site termed the Virtual Tourist at http://wings.buffalo.edu/world/. This server provides a map of the world. You can then click on a region, like Asia, and finally a country, i.e. Korea, and view a list of web servers actually operating in that country. The nature of the beast is such that it almost inherently leads you to the Internet Service Providers in that area. You might find it useful in exploring various countries and their capabilities in this area. I can spend hours "touring" this way.

Jack Rickard



Other Companies "Claim" To Offer You Financial Solutions And Software, But Do They Offer You All Of This?

So you want to start a BBS as a "hobby". ABS has software and financial services designed to help you make money on-line. Or maybe you have grown into a larger system, and you want to put up on-line shopping malls, take subscriptions, and turn your system into a business. ABS continues to have the solutions to your needs. Or perhaps you are past those road stops, and you are an Internet Service Provider, allowing people access to the Internet. ABS has software and services designed to automate your systems, and help you generate additional revenue in new and easy ways. No matter where you are along the "Information Super-Highway", ABS is here for you, ready to service your account with us, provide you with software for your systems, and cater to your needs.

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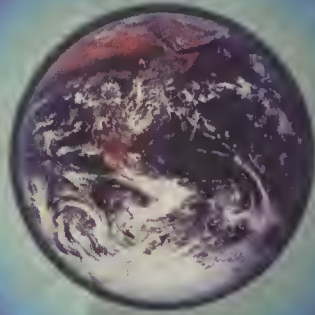
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QUARTERDECK SHIPS WIN 95/NT WEB SERVER, IPX WINSOCK

WebSTAR, for Windows 95/NT, formerly known as WebServer 32, began shipping January 10. Priced at **\$399**, the server features directory-level security and supports establishment of multiple virtual servers on a single, non-dedicated PC. "Administrators and users will both find WebSTAR an easy way to set up a small, internal Intranet server for corporate use yet also powerful enough to scale up to run a high volume public Web site," according to Emerick Woods, VP and GM for the Internet Applications business unit for Quarterdeck.

Netware LAN users often run into memory shortages when they add IP protocol stacks to the IPX stack. Quarterdeck's I-Ware Connect frees up memory with an SPX Winsock DLL that also includes firewall security features. The DLL is Winsock 1.1 compliant and works with all Quarterdeck Internet products and most others. Quarterdeck Corp.: 13160 Mindanao Way, 3rd Floor, Marina del Rey CA 90292; (310)309-4261 voice; (310)309-3707 fax; <http://www.qdeck.com>

LOGICOM TURNKEY SYSTEM INCLUDES EVERYTHING

One-stop shoppers will love the Logicom Total Internet Turnkey System. For around **\$10,000** (lease financing is available), they can get a plug-n-play Web, Worldgroup BBS and Internet server, 8 US Robotics modems with room for 8 more, broadcast fax software, an AST P-100 with 16 Mb of RAM and 1.2 Gb hard drive and sundry other items the well-stocked online entrepreneur needs. Internet connectivity ranging from 56 Kbps to T1 is also available, separately priced through DataXchange, a nationwide ISP.

Logicom has also purchased the T. A. B. S. 900 Billing Service from True Media Inc., giving Logicom customers access to 1-900 phone number payment systems. Unlike pay-per-minute 900 services, T. A. B. S. allows customers to charge a fixed amount of

money to their phone bills and receive in exchange an ID code good for a certain number of credits to spend on a participating BBS. The user simply enters the ID code when calling the BBS to add the credits to his/her account.

Logicom Inc., (800)764-4266 or (305)726-3868 voice; <http://www.logicom.com>

INTERNAUTS BUYING CARS ON WEB



Buy smart. Buy wholesale.

Many Internet store owners are frustrated by surfers who look but don't buy. Perhaps the secret of success is to offer products that people *hate* to buy in person — like cars. Auto-By-Tel supports this hypothesis with some astounding

facts: over 50,000 requests for referrals to car dealers in 9 months, with a whopping 70% average purchase rate! Consumers search for their ideal vehicles at <http://www.autobytel.com> and submit a request for quote to the service. The request goes to one of 1,100 subscribing dealers who follow up within 48 hours. The service is free to buyers; dealers pay as little as **\$25** per vehicle sold. Participating dealers accept low profit margins in exchange for nationwide referrals and quick, clean deals. "It's the best experience I've ever had purchasing a new car," says Mark Fagan.

GLOBAL VILLAGE ADDS ISDN ACCESS

Small businesses on Macintosh networks can get ISDN Internet service through GlobalCenter, the ISP service of Global Village Communications. The 64 Kbps service comes in three price/usage packages: **\$119** per month plus **\$5.95** per hour; **\$279** per month including 35 hours plus **\$5.95** per extra hour; or **\$499** per month for unlimited usage. There is a **\$499** startup fee. Global Village Communications: 1144 East Arques Avenue, Sunnyvale CA 94086; (408)523-1000 voice; (408)523-2407 fax; <http://www.globalvillage.com>

eSOFT SHIPS 96-LINE TBBS

eSoft Inc. is now shipping a 96-line version of its TBBS bulletin board system software. Up to 64 asynchronous connections for modems or terminals are supported through multiport serial cards, plus 32 network connections using eSoft's TIPX protocol, which allows users to login to TBBS from workstations on a LAN. TIPX also allows telnet connections to TBBS via the IPAD (Internet Protocol Adapter). eSoft Inc.: 15200 E. Girard Ave., Ste. 3000, Aurora CO 80014; (303)699-6565 voice; <http://www.esoft.com>

EXECNET OFFERS BUSINESS WEB HOST SERVICES

ExecNet, a major New England online service since 1986, now offers PowerWEB hardware and maintenance services for small to large business customers who want to focus on developing Web content rather than physical sites. The service includes round the clock remote access for updating and maintenance of one's Web resources, monthly activity and usage reports, voice and e-mail support. Several price plans are offered, ranging from \$9.95 to \$699 per month depending on storage, bandwidth capacity and site management requirements. ExecNet: 10 Fiske Place, Ste 233, Mt. Vernon NY 10550; (914) 667-2150 voice; (914)667-2178 fax; (914)667-4567 BBS; <http://www.execnet.com>

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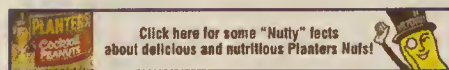
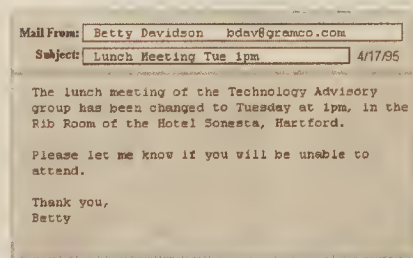
Webtronics, K. K., a Japanese venture development firm, has introduced the WebBox, a standalone unit that contains a 32-bit processor, an Ethernet interface and 2 Mb of flash RAM on a single board. Users simply connect the WebBox unit to an Ethernet hub, set an IP address/netmask on the unit's LCD panel and they have a Web server. The box requires a network equipped with a router. It supports password access, CGI scripts, file transfers and file system manipulation. A Tcl interpreter is included in ROM to enable programmability, and software upgrades can be downloaded from Webtronics' <http://www.wtnx.com> home page. The U. S. distributor is Corporate Source: (714)582-1946 voice; (714)582-3706 fax; <mailto:cs.ix.netcom.com>

U. S. DROPS "PRETTY GOOD PRIVACY" INVESTIGATION

"I've had worse days," allowed Phil Zimmerman, as he learned the U. S.

government has dropped its three-year investigation of whether the distribution of his Pretty Good Privacy public-key encryption software over the Internet violated U. S. export laws. Zimmerman wrote PGP in June, 1991, and gave the freeware program to some friends. It quickly found its way onto the Internet and thence around the globe. U. S. export laws classify encryption software as "munitions" and severely limit its distribution outside of the country. Zimmerman's lawyer said his client is "ecstatic" to be relieved of the time-consuming, expensive defense against the government's investigation.

FREE E-MAIL BEARS PAID ADS



Want to save \$100 to \$200 a year on e-mail service? You can send/receive all the mail you want if you're willing to have paid advertisements appear on each incoming message. The freemail service currently supports only basic typed-in text – no file attachments, no quoting from original messages, no signatures – but you will receive coupons good for discounts on things you may need. You need a Windows PC and modem to use the service; a Mac edition is due late in 1996. FreeMark Communications, 125 Cambridge Park Dr., Cambridge, Mass. 02140; <http://www.freemark.com> or [mail to:webmaster@freemark.com](mailto:to:webmaster@freemark.com)

EASY WEB ANIMATION FROM ASYMETRIX

Asymetrix Corp. has released Web 3D, a sophisticated yet easy to use system for implementing 3D animation on Web servers. "There's no scripting and no programming," said Steve Hawley, Product Manager for Asymetrix. "You just create your animations with Asymetrix Web 3D. Add them to your Web Page, along with the free 3D Scene Viewer. Visitors need only download the viewer once to interact with any animated scene created with Web 3D. They can even jump to other Web sites by clicking on objects to which have

embedded hotlinks." The viewer is distributable free of charge and works with Netscape 1.2 or above. The viewer and sample 3D animations are available at <http://www.asymetrix.com>

RURAL INTERNET ACCESS PROVIDERS

We've been hearing from a LOT of readers who want to bring the Internet to their corners of the "digital desert" – the rural parts of the world where the nearest ISP POP is a long-distance phone call away. Here are two companies that offer startup assistance tailored to small entrepreneurs and communities:

Online Systems Services debuted its first **Access America** installation in Waco, Texas, last December. Now it's working on projects in Florida. The Access America program targets communities of up to 100,000 people, providing Internet access services, financial models, hardware and service ordering and installation services, wiring, programming, coding and configuration of hardware and software. Support does not stop when the ISP goes online. "What makes this system so appealing to entrepreneurs is the billing software and the continuous technical and marketing support we provide," said Paul Spieker, OSS vice president of network development. OSS also offers **The Internet Game™**, a fun-packed end-user training program. Online Systems Services Inc.: 1800 Glenarm Place, 8th Floor, Denver, Colorado 80202. Voice: (303) 296-9200; Fax: (303) 295-3584; <http://www.ossinc.net> or <mailto:rsa@ossinc.net>

Keith Goodwin founded **Rural Internet Access Inc.** to bring the Net to La Junta, a remote community in southeastern Colorado. Capella Networking, a nationwide systems integrator, helped RIA get started with equipment from Livingston Enterprises. Local utility companies agreed to house RIA's equipment, and 30 carriers of the Colorado Independent Telephone Association help bring Internet connectivity to a three-town local calling area. RIA's T1 line, provided by Network 99, runs 250 miles to the hub. RIA landed 250 subscribers in its first 60 days and is now growing at a rate of 10% per month, according to Goodwin. He's more than happy to help other rural communities duplicate La Junta's success story. Rural Internet Access Inc.: (303)556-4308 voice; <http://www.ruralnet.net>

RGALACTICCOMM SHIPS INTERNET CONNECTIVITY OPTION 2.0

The Internet Connectivity Option v2.0 provides a Web site, e-mail and newsgroups, SLIP/CSLIP/PPP service for users when used with the Worldgroup client/server online service system. The ICO package works over LAN or dial-up connections, including ISDN. The Web server supports Java applets and Virtual Reality Modeling Language applications. A new TCP/IP stack supports over 200 Internet users on a single PC. Telnet, rlogin, ftp and finger are also supported. List price for ICO 2.0 is **\$995**; v1.0 customers receive a free upgrade. Galacticcomm, Inc.: **(800)328-1128** or **(954)583-5990** voice; **mailto:sales@gcomm.com** or **http://www.gcomm.com**

O'REILLY RELEASES WEBSITE 1.1

O'Reilly & Associates released version 1.1 of their award-winning WebSite™ Web server for Windows NT and 95 on January 15. A fully functional, 60-day evaluation version of the server can be downloaded at **http://website.ora.com**. New features include the HotDog Standard HTML editor; Server Side Includes that make common document components easier to maintain; virtual servers - the ability to create multiple web sites with unique URLs on a single machine; an improved WebFind™ index and search engine; Visual Basic 4 framework support for WebSite's CGI; WebView, a graphical schematic view of web site contents and links; imagemaps created with programs other than WebSite's own tool; expanded logging capabilities, support for HTML 2-3, Netscape extensions, server-push applications and Mosaic 2.1; and an expanded, 400-page manual. BBS operators can purchase the WebSite server for just **\$275** (normally **\$499**) and receive a copy of O'Reilly's *DNS and BIND* book, which will help them set up and maintain Domain Name Service software on their networks. O'Reilly & Associates: **(800)998-9938** voice; **mailto:nuts@ora.com** or **http://www.ora.com**

COMPUSERVE SUED FOR FALSE SUBSCRIBERSHIP CLAIMS

FontBank, Inc., which operates the Jerry's World marketing service on CompuServe, has sued CIS for allegedly engaging in "willful, wanton and fraudulent misrepresentation" of its number of subscribers. FontBank president Jerry Saperstein says that CIS has far

fewer direct subscribers than it claims, and that the false expectations created by the inflated membership claims have cost his company "several hundred thousand dollars." FontBank, Inc.: 2620 Central St., Evanston IL 60201. **(708)475-7645** voice, **mailto:jerry_type@aol.com**

PLUG-N-PLAY INTERNET SERVERS FROM PACIFIC INTERNET

The WebCube™ series of turnkey servers provides one-source solutions for Web, ISP and firewall applications. Based on an Intel Pentium CPU running a 32-bit POSIX UNIX-like operating system, the WebCube family includes all hardware and software needed for each application. The Series W box includes Web server and e-mail functions and starts at **\$4995**. The Series P ISP version includes a builtin T1/56 Kbps router, support for up to 128 modems and system accounting software; prices start at **\$7995**. The Series F firewall unit, still in development with pricing to be determined, features access control, packet filtering, auditing and alerting services. Pacific Internet also provides nationwide T1, ISDN and 56 Kbps Internet connectivity. Pacific Internet: 600 Corporate Plaza, Ste. 100, Culver City Ca 90230. **(310)410-9700** voice; **(310)410-9727** fax; **mailto:sales@pacnet.com** or **http://www.pacnet.com**

REAL-TIME STOCK QUOTES: \$29.95/MONTH

Data Broadcasting Corp. offers DBC MarketWatch, a real-time stock market data service priced substantially lower than any similar service offered to private investors. MarketWatch includes real-time quotes from the New York, American and NASDAQ exchanges, fundamental and historical data, a specialized business news headline service, portfolio features, links to online brokerage services and other services. Data Broadcasting Corp.: **(415)571-1800** voice or **http://www.dbc.com**

MUSTANG SOFTWARE RELEASES WILDCAT! 5 NAVIGATOR

Users and sysops can get a first look at the Wildcat! 5 online system, using the wide area beta release of the Wildcat! Navigator client program. The free 2.9 Mb software package can be downloaded from **http://www.mustang.com**,



telnet://bbs.mustang.com or **(805)873-2400**. Using HTML graphics, Navigator gives users access to browser features, e-mail, chat, messaging and file library functions when calling Wildcat! 5 systems. It includes auto-update functions that automatically download new client-side applications as needed. Mustang Software Inc.: **(805)873-2500** voice; **(805)873-2427** fax.

AMQUEST V.34 MODEM HITS 230 KBPS

Using a proprietary data compression algorithm, the **\$199** HyperModem achieves effective throughput of 230 Kbps between two HyperModems and maintains compatibility with standard v.34 and v.42bis modems. The product also employs a 20 Mhz compression engine, faster than the 14 Mhz processor found in other modems. The company claims that 230 Kbps throughput between HyperModems is achieved even if a user's communication software only permits port speed settings up to 115 Kbps; apparently the internal modem's port circuitry is controlled by firmware, overriding user software settings. AMQUEST Corp.: 1650 Manheim Pike, Lancaster PA 17601; **(717) 569-8030** voice; **(717) 569-8530** fax ♦

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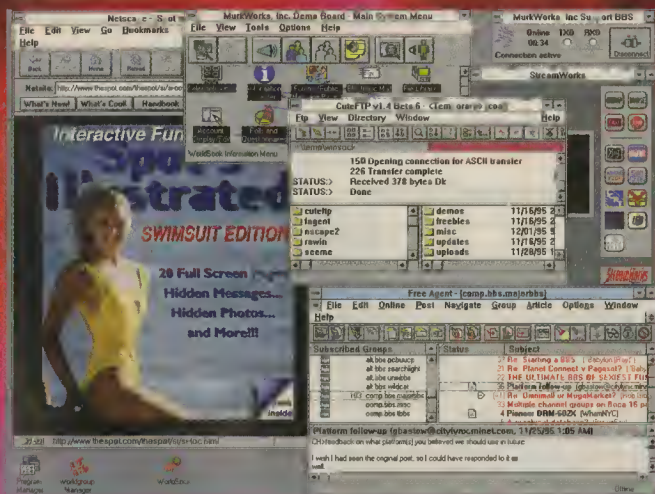
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TECHNOLOGY FRONT by Jim Thompson Western News Service

R:WEB AND ASKSAM FOR THE INTERNET

If you are running a Web Site on the Internet for your business, you have no doubt wanted to add the convenience and flexibility of a full featured database to your services.

In the past, adding such a functionality required a major programming effort.

In some cases, it was simply not possible.

Two outstanding products are now available that make linking Web pages to your corporate database not only possible but extremely easy.

R:WEB

Microrim's outstanding database program **R:BASE** has long been recognized as one of the most flexible and easy-to-use databases on the market. With their new product called **R:WEB**, Microrim has made the best of R:BASE available over the World Wide Web. Best of all, R:WEB requires no knowledge of HTML (Hypertext Markup Language), Common Gateway Interface (CGI), Perl, Visual Basic (VB) or C++ languages.

With R:WEB, you can automatically and painlessly link your home page with your corporate or company database, allowing real-time solutions to real-world problems. The links can be made to an R:BASE database or any ODBC-compliant database, which means that you can begin putting your data on the Web immediately even if you are not using R:BASE.

R:WEB runs on a Web server in the same way that R:BASE or other network-aware databases run over a local-area network server. The basic operation is simple. When an Internet user accesses an R:WEB-based form on a Web site, R:WEB generates a connection to the associated database and forms which are located on the company's network server. The program then creates a Web document based on the accessed form. This form appears on the caller's Internet browser and dynamically translates real-time information between the database application and the Web page being viewed. The user can then input information into and access information from the database.

This simple but elegant approach allows callers to browse data, enter information and request informa-

tion directly from the associated database. The online application can include R:BASE forms for querying, viewing, editing and entering data directly from the Internet.

A free evaluation copy of R:WEB is available at Microrim's <http://www.microrim.com> Web site.

DEVELOPMENT TOOLS INCLUDED

R:WEB includes **R:BASE 5.5 for Windows** as a free development tool. This is not a stripped down version, but a full-featured, highly sophisticated database. The two programs provide powerful fourth generation language (4GL) with embedded SQL and all the graphical interface design tools needed to design a powerful database. The R:WEB-compatible forms can use almost all of the sub-set of objects available in the R:BASE 5.5 Form Designer.

R:BASE 5.5 for Windows is a 32-bit relational database which is fully compatible with Windows NT, Windows95, OS/2 Warp and DOS. Level 2 SQL standards are embedded directly into the program, allow-

ing you to use both R:BASE and SQL commands interchangeably and work nearly seamlessly between different database programs. Photos and graphics can also be stored in the database.

Once created, applications are easy to maintain and update thanks to the graphical design tool set. For example, if you want to change the title in a form or add another column, all you have to do is open the form in R:BASE, place the new object or update it and save

it. From here R:WEB takes over and does the rest. There is no need to edit or re-compile complicated source code.

R:BASE also includes powerful data integrity rules, constraints and password security allowing for full control over what information can or cannot be accessed by Internet callers.

R:WEB is designed to run on an Intel-based Windows NT server running HTTP 1.0 compatible Web server software. It is compatible with any HTML 2.0 compatible Web browser software. It also requires a minimum of 6-MB of disk space as a run-time executable file on the server. According to a spokesman, future releases of R:WEB will provide

Type	Description	Quantity	Cost	Shipping	Total
Spider	Black Painted Desert Tarantula	3	\$99.00	\$35.00	\$332.00

the ability to run across multiple platforms, including UNIX and OS/2.

Microrim is also committed to the future of R:WEB. Among the plans for the future are support for HTML 3.0 and Java support.

ASKSAM VERSION 3.0

askSam Systems has added a number of Internet tools to their already robust free-form database system. **askSam** is a database that is not a database. It allows you to organize all the information that crosses your electronic desk. It doesn't matter if this is structured or non-structured information, whether it was scanned in, captured from an electronic database or generated in a word processor. askSam provides the tools for organizing the information and finding what you need, when you need it.

[Editor's Note: See Boardwatch, April, 1995 for a full review of askSam version 2]

"We have added more than one hundred new features to version 3 of askSam. All of the features, including the Internet additions and enhancements, came about after talking with our users. The result are features that are unique in the industry," said Phil Schnyder, President of askSam Systems.

The newest version provides a number of tools for interacting with the Internet. With version 3.0, you can directly import and archive HTML documents. askSam retains the formatting and the hypertext links for any imported HTML document. It also automatically imports any graphics that are included with the document. This makes it simple and easy to turn home pages or any information found on the Internet into a personal searchable database.

askSam also allows you to export documents into the HTML format without having to know anything about HTML commands or language structure. Sample forms are included with the program that make creating a home page or product information page fast and painless.

While you can create your own database applications, the folks at askSam include a couple of programs that will have you organized within minutes of the installation process. The **askSam Office** is a set of six applications that are ready to run. The suite includes databases for addresses, notes, todo lists, faxes, memos and letters. The Internet Desktop contains pre-defined templates for managing Internet information. The program lets you archive e-mail, newsgroup messages and HTML files.

The e-mail database provides facilities for importing e-mail, searching for information within your messages or for listing messages by recipient and/or sender. Best of all, askSam can import mail from Eudora. A template for Compuserve e-mail is also included. Other e-mail applications (such as Microsoft Mail, cc:Mail, etc.) must first be saved as text files.

The newsgroups database was like a gift from heaven for me. For the first time, I can organize the tons of material coming

in every day from the various newsgroups I monitor. This nifty little program lets me import newsgroup messages, search and/or read individual messages or generate a list of newsgroup messages sorted by date, sender or subject. Once a list is displayed, you can jump to any individual message in that list by simply clicking on it.

The HTML database allows for importing HTML documents, searching for HTML documents or creating a summary report. As with all documents and databases in askSam, searching for documents is easy. You can select certain text items which may be common to all documents as fields and use them as a you would within a conventional database or search for random text.

An application called "Create HTML Files" provides all the tools you need to generate a personal or business home page, a press release, list of available files on your Web site or even a product list. These are set up as examples that can be edited to suit your needs.

From here you can also define a hypertext link to a URL so you can link to

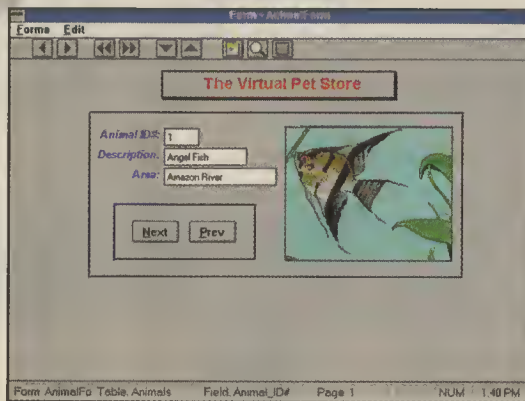
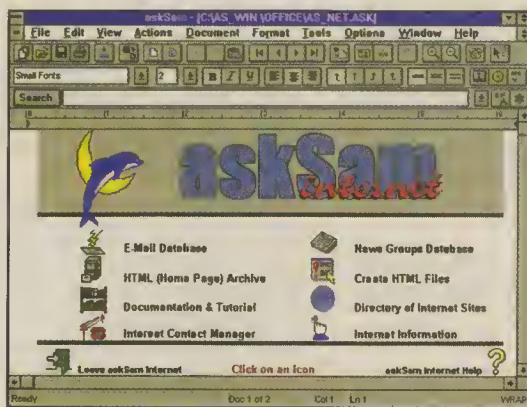
other Internet sites. Graphics contained in an HTML file are automatically exported in either GIF or JPEG format. Best of all, you can accomplish this without any knowledge of the HTML language.

askSam Internet also provides a directory of Internet sites broken down by categories such as Computer Magazines, Financial, Music, Religion, Travel, Comedy, Government, Science, Law and Entertainment. Selecting any of the categories produces a list of individual sites with a brief description. A click on an item in the list pops up a dialogue box with the address. For example, selecting Time Magazine from the magazines list produces the address: **http://www.timeinc.com/time/magazine/domestic/toc**. The URL can then be copied to the clipboard, making it easy to switch to your browser and paste the URL into the Location field.

An application named "Internet Info" provides information and tips on using the Internet. Here you will find such topics as "What is the Internet," "Basic Internet Terminology," "Internet Etiquette or Netiquette," and "Interesting Internet Sites."

In addition to the new features, askSam version 3 also provides all the functions and convenience that has made this program a leader in the free-form database arena. Among the outstanding features are "Fuzzy Searching" (which helps you find information even when you are not sure of the spelling) and the ability to directly import graphics and database files. The files are sorted in the database and stored in a compressed TIFF format.

The professional version of askSam (version 3) adds the ability to do full text indexing and index searches. With askSam you can search any document without the need for indexing. However, with indexing the speed of those searches is greatly



increased. Indexing allows you to search through several hundred megabytes in a matter of seconds.

"By adding indexing, we increased the performance of the program. It also allowed us to add the ability to display the number of hits in a search. When searching very large documents, this can be a major advantage since it lets you narrow down the search based on the number of hits. If the search comes back with a thousands hits, you can narrow the search criteria to find what you want. Indexing also produces a word list which is often very useful," said Schnyder.

askSam version 3.0 runs under Windows, Windows95, Windows NT and OS/2. It requires 386/486 or better processor, at least 4-MB RAM and 6-MB of disk space.

ASKSAM WEB PUBLISHER

The newest Internet tool from askSam Systems is the **Web Publisher** — a full-text database Web publisher for Windows NT Web servers. Although it was not available at the time of this writing, the askSam Web Publisher promises to make it easy to publish a full-text searchable database on the Internet.

The new program, which will be available at the time this article is published, allows you to import word processing documents (Microsoft Word, Word Perfect, ASCII, etc.), data files (dBASE, CVS, Comma Delimited, etc.) any text and any HTML document into askSam. In fact, anything that can go into askSam, can be made available on the Web. Just like the offline version of askSam, the database can be searched using boolean search criteria to find specific documents or records.

No programming knowledge is necessary to create the database. This means that even non-technical people can create full-text, hypertext-linked databases for the Internet.

"If you have the askSam Web Publisher installed on a server, you can put any askSam database up and anyone using any browser — NetScape, Mosaic, Microsoft's browser or any other — can search and look through your database. All the hypertext links created in askSam work on the Internet. Our publisher translates the documents to HTML on the fly. It's quick and extremely easy," notes Schnyder.

The first version of the program will allow an Internet user to browse a database, search using boolean search criteria, and use hypertext links. This hypertext link can be to another document or database or to another Internet site (URL) as well. Future versions will allow users to enter information directly into an askSam database.

While I have not seen the Web Publisher, judging from their current list of excellent products, I have no doubt that this one will also be a real winner. If you want to publish an existing database or just a lot of information on the Web, you owe it to yourself to take a close look at askSam System's Web Publisher.

The new Web Publisher will be in open beta with copies available on their Web site. A final price for the product has

not yet been announced, but it is expected to sell for approximately \$1,495.

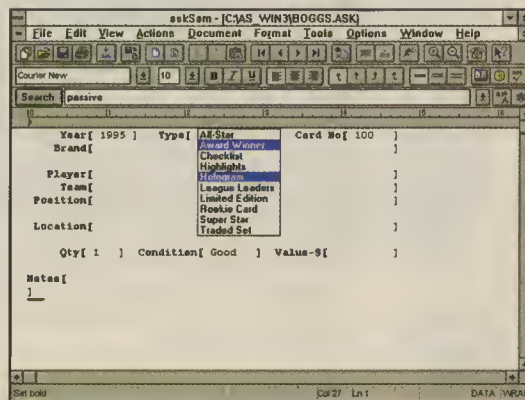
CONCLUSIONS:

Both Microrim and askSam Systems offer excellent approaches to publishing databases on the Web. Each offers a slightly different approach to accomplishing this and will fill different needs.

R:WEB is an excellent program that benefits greatly from the ease of use and features available with R:BASE. The combination of the two (R:BASE and R:WEB) provides a wealth of features and functionality. R:BASE is also an extremely easy to use program that even the novice user will find comfortable. I also like the fact that it is a 32-bit program. This takes full advantage of Windows95 and other 32-bit applications and provides the speed needed when working with large databases. The one drawback at the moment is that it runs only on a Windows NT server. This is a stumbling block for those running other operating systems. However, I have been assured that they are working on versions that will run on other operating systems such as UNIX and OS/2.

I make no secret of the fact that I have been a long-time user and supporter of askSam. Their products are easy to use, versatile and powerful. The Internet tools provided in version 3 of askSam are among the best I have seen. Learning HTML is not terribly complicated, but it can be frustrating. Having a program that automatically exports documents into the HTML format not only does away with most of the frustration but saves lots of time as well.

The ability to import HTML documents into askSam has certainly made my life easier. For the first time, I can actually get some real use out of the many pages I have collected over the Web.



CONTACTS:

R:WEB and R:BASE
Microrim
5395 SE 30th Place
Bellevue, Washington 98007
(800) 628-6990 or
(206) 649-9500 voice
<http://www.microrim.com>
R:WEB and R:BASE (Includes
R:BASE 5.5): \$995

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<http://www.askSam.com>
askSam version 3.0 \$149.95
(upgrade: \$79.95)
askSam Professional Version:
\$395 (upgrade: \$250)

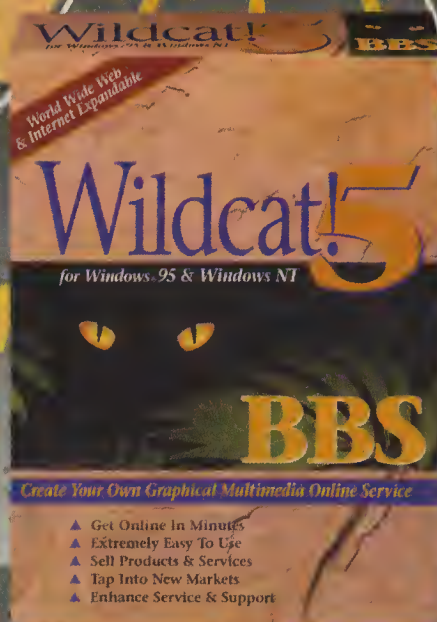
AskSam Web Publisher looks to be another winner. The idea of being able to publish a collection of virtually any type of structured or unstructured information is certainly exciting. Judging from the past products from askSam Systems, I have no doubt that this will not only work as promised, but provide the highest level of functionality.

Both R:WEB and askSam Web Publisher will open vast reserves of information to people around the world. Both offer excellent approaches to publishing on the Web. ♦

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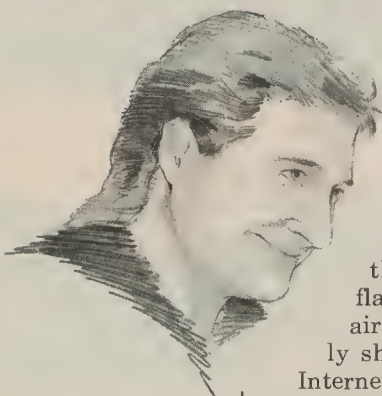
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BABB'S BOOKMARKS by Chris Babb

BORROWED HIT COUNTERS

*F*inally! I have finally seen something on TV that actually helps to paint the Internet in something other than flashing red lights! The Discovery Channel aired a program just last night that actually showed some of the finer points of the Internet, its uses and its results on the lives of regular people. It was a refreshing change from all the other crap that dwells on the worst that the Internet has to offer — which, for all practical purposes, is no different from the rest of the bad that our society offers today.

The Internet (and the hysteria that surrounds it) is nothing less than what happened when rock and roll was becoming popular. Back then, R&R was labeled as something that was poisoning the bodies and souls of teenagers. It was evil, it was loud, it represented ideas and opinions that some were not eager to hear, it caused teenagers to dance funny, many people didn't like it and so, in the finest traditions of the uninformed and ignorant masses, it was deemed inappropriate and all kinds of measures were taken to attempt to have it banned from the stores, from the airwaves and from the lives of those who found refuge and delight in its pounding rhythms.

Sound familiar? It should. Some will argue that it isn't the same. That what happened then is nothing akin to the world wide accessibility that the Internet gives us today; the ability to be forced to read and view things that no one should be able to see; the ability to get information that, I'm sorry to inform them, has been available in other forms for years. OK, I'll admit that what was happening with R&R then doesn't sound exactly like the Internet today on the surface, but the crying and complaining is virtually the same. It's evil, it represents ideals and opinions that some are not eager to hear, it causes people

to do funny desktop dances with rodents and in keeping with the finest of traditions, it is deemed inappropriate by those who are both afraid and ignorant of what it really has to offer.

Now, before I take the wrath that the saviors of our souls will surely dish out, yes, there *are* bad things that can and will happen with the Internet. But, I submit to those same people, I can walk out of my house or simply drive down the road and get shot or robbed. Now, you tell me, which is worse?

Enough of this dribble. The subject of this months article is Hit Counters. Counters are cool and EVERYONE who has a web page seems to want one.

A good majority of the e-mail I receive centers on people looking for an easy way to count the number of people who visit their Web page. Why is this important? One obvious reason centers on a provider's ability to charge a customer to host their Web Page. Another reason is just a self-centered interest in knowing how many times a page has been accessed and some way to boast about it to others. Regardless, the providers are demanding numbers and the users are beating down the door to get theirs too. Hopefully, this will help both of them.

Now, in order to make all of this understandable, let's define a few terms that always seems to come up when talking about counters.

Hits - the number of times a Web Page has been requested from a Web Server.

Accesses - Same as Hits really, just spelled differently.

Unique Accesses - The ultimate goal. The number of times a Web Page has been loaded by different *people*.

Unique accesses is the type of counting that is most requested but is more difficult to perform. This is due in part to the way that Web Servers work by connecting, sending the required files and then immediately disconnecting, rather than something like FTP or a news server where you are actually connected to the server until you physically disconnect. The most difficult part of all of this is actually defining what is meant by "unique."

Is a "Unique Access" a specific, first-time access request from an IP number? If so, what about dynamic IP addresses? Or, is it any access of any page from any IP requesting it?

How do you define a page? Some will say that it includes the main page and all associated pages stored within the same server. Others will say that it is each individual HTML file stored on the server. I define it as a single HTML file since most counters are tied to a specific Web Page.

Regardless of how you define it, until better ways to measure Web page accesses comes along, hit counters are subjective at best and deceptive at worst. I guess it really doesn't matter to most people though. They just want their counter!

So, given the state that things are in, what are the factors that you should consider when implementing your own counter? Service Providers have a wide variety of products they can use, limited only by the type of OS and server software they are running. There are counters available for almost every Web Server on the market. They differ in many respects and range from full blown statistics programs with reports and graphs covering various periods of time to simple programs that do nothing more than display a graphical readout of the number of times the page has been requested.

Some counters are run through the CGI (Common Gateway Interface) and others gather page hit stats through programs that scan your Web Server log files. They are all fairly easy to implement and do a great job of letting you know how popular your site and/or your users pages have become.

Users who have the ability to put up their own Web Page through their provider have fewer choices. If your provider offers a counter program (not all of them do), you can request the proper HTML tag format to drop into your page to display it. If your provider does not offer a counter, there are a couple of free services that allow you to register your page with them. In turn, you will receive the proper HTML code necessary to display your counter. The actual counting and return of the counter graphic will take place from a remote site. This is a great idea and I suggest this to anyone who cannot get a counter from their provider. The only drawback is that when the remote site goes down, so do the counters. Another drawback is that if your page begins to get lots of hits, you may be dumped from the service or asked to make a small payment per month to keep your counter alive and help them cover their bandwidth bills.

THE COUNTERS

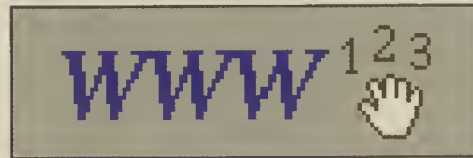
The sites listed below should give you some insight as to what's available in counters, how to set them up and even how to write your own as long as you're not C, C++, Visual Basic or PERL challenged. There are many links within these pages that can direct you to many other Web counter resources so be sure to follow them all.

WEB-COUNTER HOME PAGE

http://www.digits.com/web_counter/web_counter.html

This site is the best of the public access counter pages. By simply filling out a form listing the name you want to give your counter, your e-mail address and the URL of the page you want counted, you will receive the HTML tag and information necessary to add a counter to your Web page.

This site also offers the ability to start your counter at any number you want. It questions you on whether you want to be included in its top-ten lists and whether your Web page con-



tains any adult material. This last question may draw the ire of those bent on keeping the Internet as the

last bastion of free thought and expression, but it shouldn't. This information is not used to censor anything. It is simply used to get you into the correct top-ten list. They ask that you be truthful, though, as they reserve the right to classify any page as containing adult material and move it to the appropriate top-ten list.

This site also offers commercial services to high-volume Web Pages. Prices are very reasonable starting as low as \$3/month for up to 50 hits/day and range upwards to \$28/month for up to 1999 hits/day with an additional \$10/month per 1000 hits/day over 1999. (Here's hoping that someone doesn't get mad at you and hits your page over and over... one of the reasons I don't like this way of charging). Commercial services also offer benefits such as performance guarantees, additional statistics and more services to come in the future. All payments can be made via First Virtual — <http://www.fv.com> — or Mark Twain Bank — <http://www.marktwain.com/ecash.html> — or by check.

The counter is extremely configurable with the number of digits to be displayed, foreground and background color designations, the ability to hide the digits and justification controls. The most impressive configuration item is the ability to choose from among 27 different character sets that include standard, digital clock, odometer and other specialty numbers.

All in all, this is an extremely useful site to anyone who wants a reliable counter on their page and doesn't run their own Web Server.

INTERNET AUDIT BUREAU

<http://www.internet-audit.com>

The Internet Audit Bureau is another excellent and free service for tracking hits to your pages. IAB works a little differently than putting the standard counter on your screen for all to enjoy.

Statistics are kept on the IAB server. There is no counter that



appears on your screen. Instead, a snip of HTML code that points back to the IAB server is all that's needed. This bit of code drops the IAB logo on your screen and allows IAB to record accesses to your page whenever this graphic is loaded from their server.

This is a great idea but it is also a drawback. If a user who has graphics turned off or is using a text based Web browser accesses your page, it is not counted. Since many people browse this way to save time and money, your hits will be undercounted.

In order to register your page, you are required to fill out a fairly extensive form asking for your name, organization, position, address, contact information and a username and password. Once completed, you are taken to another form where you define the URL you want stats kept on, along with the page title, a description and keywords for your page. Once completed, you are given the proper HTML code to drop on your page. You are allowed to use this code on many pages or just a single page and you can also add as many URLs as you wish to your account. Easy enough.

To view your statistics, you must log into the IAB web site and enter the account number for the page you want to view stats on. This was a bit of a pain as I discovered that this site takes quite a bit of traffic and is slow to respond. While the logging of stats seems to work all the time, getting in to view them is another matter entirely. Since this is the only way to view the stats for your page, there is the possibility of getting quite frustrated while trying to shoehorn your way in. My best suggestion? Just keep trying.

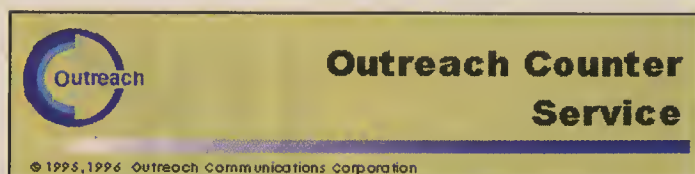
Once you are finally able to view your stats, you are presented with a list of your registered URLs and two ways to view them. You can view a text version which lists access counts daily, weekly and monthly along with averages, or you can download a program called *Iview*. This handy program will allow you to view your stats in a graphical format and seems to work quite well.

Another service offered from these pages is "The Big List." This is a list of the top sites that are tracked by IAB and categorized by subject. There is quite a collection of sites listed here which could keep you busy for quite some time. What's nice about a list like this is that it constantly changes and it gives you an opportunity to visit some of the most popular sites on the Internet.

If you're looking for a free service that gives slightly more detail than just a running total of hits, this is the place to be.

OUTREACH COUNTER SERVICE

<http://www.outreach.com/ocount>



If you're looking for more than just a counter, consider visiting this page. Outreach Counter Service will give you a counter for your page and also provide statistics on who has accessed your page and when they did it for a low fee of

\$9.95/6 months. Payment is made through a secure form where you enter the normal information and a credit card number. You can also pay by phone if you fear sending your card number through the bitways.

Be sure to read the fine print as this price is really for 6 months or 25,000 hits, whichever comes first. If your site had moderate use, this will work out well. If you're getting lots of hits or someone decided that you have the superlative site of the millennium, you could burn this up in a matter of hours or days.

Once you receive your account number, you just drop a bit of HTML code into the page you want counted. You can also count other pages by modifying this code and dropping it in. Other options include the ability to hide the counter and a wide assortment of digit styles. Whole sites have popped up that cater to counter digit styles and there are scads of them available. This site offers 11 different digit styles and also allows you to concoct your own (see The Museum of Counter Art below).

This site also offers more than just counter services. A wide variety of detailed information is available on HTML, CGI and other Web related material. There is also lots of information on choosing color combinations for text and backgrounds that will help you make the most of your web pages. Well worth the visit.

ANTI-COUNTER(R)

<http://www.cs.wisc.edu/~jenner/anti-counter.html>



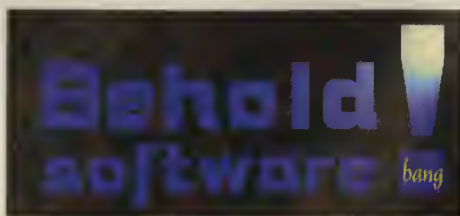
With all the talk about accurate counters, here's a page devoted to *not* keeping an accurate count. As described on this page, "There are 2

kinds of people on the World Wide Web, those who think a counter on their home page is the hottest thing since fertilizer and those who think a counter on their home page has about as much purpose as a tattoo on their liver."

This page was obviously created by the latter type of person and I thought it was really kind of funny. Quite simply, this counter doesn't count sequentially but generates a random number each time the program is accessed. Complete information on linking to the Anti-Counter(r) are provided along with several configuration options for font type and width of the number. Quite useless but sure to confuse anyone who visits your page regularly

BEHOLD! SOFTWARE - WEB PAGE COUNTER

<http://he.net/~bbsbs/ behold/counter.html>



Behold! Software has two Web page enhancements available. The first is the trusty counter. This counter is similar in appearance to

the counters listed above and has many features available. The counter can be used with Win95 and NT and is guaranteed to work with the following Web Server Software: SAIC-HTTP, EMWAC HTTPS, Purveyor, Website, Netscape and Alibaba. Three versions of the program are available, one each for Intel, Alpha and MIPS processors (the latter two being for Windows NT only).

This page also includes links to sites that are using the counter program with the above mentioned servers so you can see for yourself how it performs. The list is quite extensive and includes some interesting sites. If you're not really looking for a counter program, at least pound your way through these sites for a bit of fun and entertainment.

Complete instructions are available through links on this page and in the downloadable program. I took a quick look and was happy to see several excellent features. A security file can be set up that will prevent the counter program itself from being accessed by unauthorized persons - a very necessary feature to prevent someone from just linking to a counter on your site. Another file will hold a list of IP numbers that will cause the counter to *not* increment. This is useful to prevent a misleading count being generated when working on your page or just taking a gander at the traffic your page is generating. Other features include the ability to set foreground, background and transparent colors, font styles, the width of the counter in digits and the ability to hide the counter on a page.

The second Web enhancement offered works exactly like the counter program but displays a clock instead. This program works with Win95 and NT and the servers listed above. There is also another list of sites that are currently running this program under the different servers and complete instructions on setting up the clock and modifying the many options that it offers.

For anyone looking for a good, easy-to-use counter (or clock) to place on their server, this is a great place to check.

THE MUSEUM OF COUNTER ART

<http://www.ganesa.com/Ganesa/Museum/index.html>



This site is not really a counter site but will appeal to anyone using a counter program that uses individual numbers such as the Behold! Software Counter program, Outreach Counter Service and several others. There are close to 100 different sets of numbers available and all of them are free.

The styles currently available include simple odometers, normal text, fancy art and a wide variety of LEDs. Also

available are extremely strange styles like the abacus, lotto balls, children's blocks and an extremely gaudy set of numbers designed from bananas.

All of these number sets are categorized to make it easy to find one that appeals to you. The categories include Digerati (Kraftwerk fans know what this means), Natural Materials, Essence of Functionality, The Fun Room and several others. My personal favorites are found in the Curator's Attic and the Hall of Style and I am certain that there will be something here that appeals to everyone.

This page also includes links to WWWebula (a Mac counter program) and several other Windows and UNIX based counters. If you're looking for unique counter numbers, be sure to pay a visit here.

NUTSITE® OF THE MONTH

Human nature has always fascinated me. The utter stupidity and total disregard for common sense that is exhibited in everyday life is both amazing and hysterical. Its ability to make us laugh, groan or shake our heads in disbelief has spawned TV shows, radio shows and, of course, Web sites. My choice for Nutsite of the month of March comes not so much from the strangeness of the site itself, but the nuttiness of human stupidity. Read on...

OVI'S - WORLD OF THE BIZZARE

<http://netmar.com/users/ovigher/ovi.htm>



Submitted By: *Ovidiu Gherghie*

I loved this site from the moment I saw it. It is filled with "shocking true" stories, showing the supreme stupidity that surrounds us like a wet blanket along with a healthy dose of stories that are just plain strange. All of them are categorized by month and year and will surely leave you shaking your head in disbelief. Well, then again, after the last few years of people suing others for their own stupidity or shooting someone because of a toy that was taken away from them as a kid, these interesting tidbits may not surprise you at all. Nevertheless, they are quite entertaining and make this a site well worth the visit.

Months' worth of the stupidest of things that people do in all of its worldly splendor.

That's it for March. Enjoy the counters, enjoy the Nutsite and enjoy the Net. Let's keep it free from the influence of those who know nothing about it except that they know nothing about it.

I have these as well as all of my past articles available for your perusing pleasure at:

<http://www.aquila.com/babbs.bookmarks/>

Keep those Nutsites rolling in! Comments, good (preferred) or bad (only if you must) should be clicked off to:

<mailto:chris.babb@aquila.com> ♦



BATTLE OF THE BROWSERS

by Forrest Stroud

The applications reviewed here and many more are available on Stroud's Consummate Winsock Apps List, <http://cwsapps.texas.net> and <http://cws.wilmington.net>.

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If 1995 was the year of the web browser, there's little doubt that 1996 will be the shakeout year for web browsers. Most browsers have already acquiesced to the power of the two reigning titans, Microsoft Internet Explorer and Netscape Navigator, and many of those left will likely capitulate to the intense pressure of waging war against the best of the best. After all, how can anyone beat the features and, perhaps just as important, the cost of these two clients?

For the majority of 1995 it appeared that Netscape would reign supreme on the web, garnering nearly 85% of the market and constantly upping the ante with new features. Each day would see another web site go the "Netscape-Enhanced" route, and each day would also see another web browser lose popularity points to Netscape. Add in the fact that Netscape could be evaluated for free (and even used on a permanent basis for free by educational and non-profit institutions), and it becomes clear as to why the battle was nearly over before it had even begun.

If anyone could challenge the dominance of Netscape, it would have to be the folks from Redmond. In August, 1995, Microsoft released version 1.0 of its own web browser, Internet Explorer. With a feature-set roughly comparable to Netscape 1.x, Internet Explorer 1.0 gave a ray of hope to those who had sought a suitable sparring partner for Netscape.

In response, Netscape jabbed with Java and punched with power as the first beta releases of Navigator 2.0 arrived on the Net. Since then, Internet Explorer and the rest of the web browser market have once again been relegated to playing catch-up. In this feature report, we will examine the superiority gap between Netscape and its competition as well as analyze the continued struggle between the top two browsers on the Windows 3.x/95/NT front. From there, we will attempt to glimpse into our crystal ball and offer a hint of where the two champs are headed in the future.

Rarely does a product or service arrive in the marketplace with as much fanfare and support as Netscape Navigator did. Improving on the original web browser, NCSA's Mosaic, Netscape 1.0 introduced the first HTML (HyperText Mark-up Language) tags to conform to the proposed HTML 3.0 standard for web documents and even added a few proprietary tags of its own that would eventually lead to the self-promoting "Netscape-Enhanced" web pages so frequently encountered on the web today. For the first time, webmasters and novice web designers could make use of tables, advanced forms,

NETSCAPE: CASE STUDY IN DOMINANCE

HIGHLIGHTS

The Good: Netscape offers several critical advantages over the competition, including more features than any other web browser, more plug-in modules, an integrated suite of Net applications, support for Java, and availability on all Windows platforms.

The Bad: Netscape's integrated mail client and newsreader stand out as the facets of Netscape that need the most improvement. Relative to standalone clients like Eudora Pro and Agent, Netscape just doesn't measure up. However, compared to similar clients offered by other web browsers and Net suites, Netscape's mail and newsreader apps fare much better but are still not as strong as they need to be.

Version Reviewed: 2.0b5

File Location: <ftp://ftp.netscape.com/>

Windows Versions

Available:

Status:

Windows 3.x, 95, NT
Free for evaluation, education, and non-profit use
(\$39 for commercial use)

Company:

Website:

Netscape Comm. Corp.
<http://home.netscape.com/>

built-in security, background colors and images, centering, inline JPEG support, and many more features in their web pages. Of course, all of this was to the detriment of other web browsers on the market. NCSA's Mosaic, Cello, WinWeb, SlipKnot, and Air Mosaic were all rendered obsolete as web developers decided to forsake the tradition of designing pages that conformed to the lowest common denominator and instead sacrificed compatibility for a chance to distinguish and improve their web sites. Other browsers would later mimic the features of Netscape, but not before Netscape had gained a nearly insurmountable lead in market share.

For a long time, it appeared that Netscape would rest on the success of the 1.22 release, and it may well have done so for a while had Microsoft's Internet Explorer not been released. Faced with the newcomer's challenge, Netscape revealed a one-two combo that left the developers of other web browsers reeling in dazed frustration and angst.

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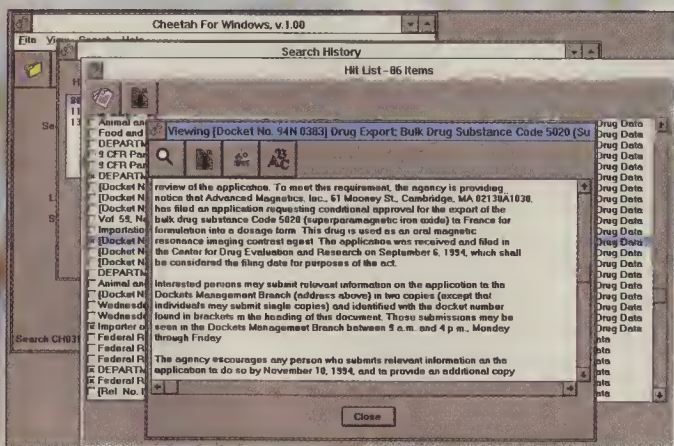
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Screen shot from APDI's new Cheetah for Worldgroup Product

APDI's Cheetah product is the on-line industry's fastest and most powerful full text search and retrieval program. Search one or multiple databases using Boolean and proximity search phrases. Megabytes of data can be searched in fractions of seconds. You can take advantage of Cheetah on your system running at APDI's Service Center or you can buy the package to run on your in-house system. Cheetah is compatible with virtually all popular BBS programs including a new version for Galacticomm's Worldgroup!



President Mark Burnett in one of APDI's Computer Rooms

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- Complete virus scanning
- 7 by 24 system monitoring
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- Galacticomm, Inc. • Mustang Software, Inc. • CompuServe Network Systems

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...having worked with APDI in setting up the PTO's on-line information system we continue to be impressed with their high quality of service and professionalism.

Jim Moriarty, United States Patent and Trademark Office

...we are very impressed with APDI's excellent support and operation of mission critical Worldgroup based on-line systems.

Scott Brinker, President, Galacticomm, Inc.

...CompuServe is excited about the benefits that APDI can bring to our existing and future client base.

Jeff Kiely, CompuServe Network Systems

The first beta release of Netscape 2.0 added built-in support for what many consider to be the future of the Net, Java — an applications development language that gives users access to distributable applets over the Net. Java allows web users to download fully executable programs from a web site and run them on their local machines. Netscape also offers internal support for JavaScript, a scaled-down scripting language based on Java and designed to be easier to use for novice Javaheads. Java has garnered the support of many web developers and has once again prompted many sites to dust off that old “Netscape-Enhanced” logo.

In the background of all the attention given to Java, the 2.0 release slipped in another feature that has already had more impact than Java and will likely continue to be the most important of Netscape’s many features. Enhanced functionality and expandability, as well as popular support from other web vendors, resulted in the emergence of plug-in modules — complete and separate programs that integrate with the web browser to give Netscape unparalleled power.

Plug-in modules give Netscape users internal access to various capabilities hitherto made possible only through the use of external helper applications. Although plug-ins have only recently begun to emerge on the Net scene, there is already an abundance of goodies to explore, including audio apps, video clients, fractal viewers and similar new graphic programs, web animation applications, Virtual Reality Modeling Language (VRML) browsers, and more (for a detailed list of plug-in modules currently available, check out the accompanying feature “Plug-in to the Future of the Net”).

Internet Explorer is currently the only other browser to offer support for plug-in modules, but it’s currently limited to only one plug-in — a Microsoft VRML project, Virtual Explorer. Much like the security and table features Netscape implemented half a year ago, plug-ins and Java are quickly revising the way users and developers utilize the web and all are, once again, doing so to the detriment of other browsers.

Netscape decided not to stop with just the additional support for Java and plug-ins. In addition to adding many new HTML tags in the 2.0 release (including super/subscript, frames, targeted windows, and more), Netscape took a big step forward in its pursuit of becoming a full-fledged Internet suite by adding a complete mail client (for sending and receiving e-mail) and newsreader. While the mail client and newsreader still trail the best standalone clients like Eudora Pro, Pegasus Mail, and Agent, both are being continually improved and, if they can eventually offer the power and ease of use found in the web browser, Netscape may well become the only application most users need.

In terms of new tags in the 2.0 release, frames, client side image mapping, and targeted windows have currently proved to be the most interesting. Frames are a way of specifying multiple, scrollable regions within a display window — think of them as multiple web windows within windows. Each frame can contain a separate HTML document which can be scrolled and resized independent of other frames. Current manifestations of the Frame tag have appeared as banners, tables of content, display panels, advertising logos, and similar graphics where regions of the screen can be “frozen” while other regions can be scrolled for greater readability and usability.

Client side image mapping, a standard feature in Internet Explorer since its initial release, allows webmasters to create pages with clickable image maps that are interpreted on the

client platform, not the host server. For many web developers without access to or knowledge of the web server’s intricacies, client side image mapping will indeed be quite a godsend. The targeted windows tag allows webmasters to associate links with a new window (a separate browser process) rather than using the current window, enabling the user to retain the information on the page with the link and also on the new page.

In the midst of all these new features and capabilities, it’s easy to forget that the official release of Netscape 2.0 has yet to be announced (as of the time this story goes to press) and that even more features are expected to be implemented before this release. The most promising of these are two add-on packages (not included with the standard 2.0 package). Netscape Communications Corporation will be releasing a deluxe package known as Netscape Gold, which is expected to include a fully functional internal WYSIWYG (What You See Is What You Get) HTML editor with the web browser. It will be interesting to see how features like tables, frames, and plug-in modules are handled by this editor. Another deluxe offering from Netscape will be LiveWire, which, along with Netscape 2.0, will allow developers to create, modify, and maintain online sites and applications through a simple drag-n-drop interface that utilizes Java and JavaScript. Interactive multimedia content, or Live Objects, can be created and executed from within Netscape 2.0 with the use of LiveWire. All of these new features make it painfully obvious to the competition that Netscape will no longer be resting on its laurels.

INTERNET EXPLORER: CONTENDER OR PRETENDER

HIGHLIGHTS

The Good: Internet Explorer currently exploits several advantages relative to Netscape and other web browsers, including proprietary tags (marquee, for example), background sound support, global font sizing, inline support for AVI videos, and advanced tables support. In fact, Internet Explorer is the best browser available for handling tables within web documents. Perhaps its best feature, Internet Explorer is free for all Windows 95 users.

The Bad: Microsoft’s Internet Explorer lacks many of Netscape 2.0’s best features, including support for Java, frames, targeted windows, and an integrated mail client. The Explorer is expected to support a variety of platforms in the future but is currently limited to just Windows 95 and NT platforms. Internet Explorer does support plug-in modules, but only one (Virtual Explorer) is currently available, as opposed to at least fifteen currently supported by Netscape.

Version Reviewed:	2.0
File Location:	http://www.windows.microsoft.com/windows/download/msie20.exe
Windows Versions Available:	Windows 95, NT
Status:	Freeware
Company:	Microsoft Corporation
Website:	http://www.microsoft.com

So where exactly is Netscape headed from here and how does it currently stack up to Internet Explorer? Look for Netscape to improve on its supporting cast of clients, especially its mail and newsreader clients. A ton of new plug-in modules will likely arrive on the Net in the next few months, and don't be too surprised to see third-party vendors working hard to make up for Netscape's current shortcomings by releasing feature-rich, easy to use mail and news plug-in modules. As far as new HTML tags go, Netscape will likely continue the precedent of assimilating the best proprietary tags in other browsers, as it did when integrating Internet Explorer's client side image mapping into the 2.0 release. Additional tags should include the marquee tag, HTML 3 math tags, background sound support, and inline support for additional graphic filetypes (Johnson-Grace's ART images, for example). Finally, if the Netscape Gold HTML editing capabilities aren't up to par, look for a plug-in to be released that meets and exceeds the needs of most web developers.

As Netscape quickly established itself as the premier web browser, people started placing their bets on how long it would take Microsoft to respond. Microsoft did indeed respond in late 1995 with a client comparable (but not superior) to the Netscape release available at the time, 1.22. Incorporating proprietary Netscape tags like centering, background images and colors, and basic tables, as well as support for transparent GIFs, inline JPEGs, security and caching, Microsoft's 1.0 release of Internet Explorer immediately vaulted onto the web scene as the second most popular web browser. Unlike Netscape, Internet Explorer is free for both non-commercial and commercial use. However, Internet Explorer has only been released for the Windows 95 and NT platforms. Microsoft reports that a Windows 3.x release is scheduled to be released in the near future.

Internet Explorer followed in Netscape's footsteps in many ways including, for example, integrating an internal newsreader and advanced bookmark management system into the browser, which, while not quite as powerful as the ones included with Netscape, were solid enough to help distinguish Internet Explorer from the rest of the competition. The Explorer also offered external mail sending capabilities by utilizing the Microsoft Exchange mail client. Still, neither the internal newsreader nor the external Exchange client fare well when compared to the respective clients found in Netscape, and all the clients pale in comparison to the best standalone clients available on the Net.

Seeking to rise above Netscape, Microsoft implemented its own proprietary tags, including background sound support, client side image mapping, the marquee tag, and global font sizing. Background sound support, similar to background colors and images, allows webmasters to implement sounds that run while the web page is being viewed. Background images, like watermarks, allow web designers to add an image behind the current web page rather than having to use the default background color. Client side image mapping, discussed earlier, gives web users access to clickable image maps without the need for server-side instructions. The marquee tag, perhaps Internet Explorer's best proprietary feature, displays a scrolling message across the page in the form of a banner similar to common stock ticker bars. Finally, with global font sizing users can increase or decrease the entire size of the web page without actually changing the web page itself. With both Netscape and Internet Explorer releasing proprietary features, feature-warfare between the top two browsers had begun.

Constantly developing and implementing proprietary HTML tags gives web developers ever-expanding tools with which to make ever more impressive web sites. But without conforming to any set standards, these browsers are setting a trend that could be disastrous for the web.

Microsoft did not merely stand aside and watch as Netscape added support for Java, frames, targeted windows, plug-in modules, and additional new tags and features in the 2.0 release; in fact, the folks in Redmond were busy adding new features in preparation for their own 2.0 release. Inline support for AVI videos (Microsoft's Video for Windows format), security (Secure Sockets Layer, or SSL, now and Microsoft's own ultra-secure Secure Transaction Technology, or STT, in the future), advanced tables, and additional font capabilities were just a few of the features Internet Explorer released with the 2.0 version. Internet Explorer also added its own support for plug-in modules, but to date only one plug-in has been released for Internet Explorer, Microsoft's own Virtual Explorer (see the accompanying feature "Plug-in to the Future of the Net").

Despite all of these new features, Internet Explorer has had a difficult time measuring up to Netscape Navigator, a situation which will likely only get worse in the future. As Netscape showed with its 2.0 release, it will do whatever it takes to maintain its 80+% market share for web browsers. The Explorer finishes runner-up for several reasons.

First, Explorer lacks many of Netscape's best features, including Java, frames, and targeted windows. Even when Microsoft integrates Netscape's features into its own client, as it did with tables support, plug-in modules, and proprietary Netscape 1.x tags, Netscape makes sure that it stays one step ahead by adding new and improved tags and features.

Second, Explorer currently lacks the third party support that Netscape has done such an excellent job of gaining. Until Microsoft can get vendors of Netscape-specific plug-in modules to add support for Internet Explorer, as well as gaining some exclusive vendors of their own, Internet Explorer will be destined to the second tier of web browsers.

Third, Netscape is available for all the Windows platforms, the Macintosh, and a multitude of UNIX systems; Internet Explorer is currently limited to only Windows 95 and NT users, severely limiting its potential user base. Despite its impressive lead over the rest of the web competition, Internet Explorer has a huge gap that must be narrowed between itself and Netscape Navigator.

In order to bridge the gap, the Explorer will need to overcome the above limitations, as well as take several additional steps. First and foremost, Internet Explorer should, and likely will, concentrate on one of Netscape's few weaknesses.

First, if Microsoft can improve the Explorer's internal newsreader (perhaps in the vein of Netscape 1.x's own newsreader) and add a complete line of integrated mail, ftp, and telnet clients, Internet Explorer will be the consummate Net suite application that Netscape can currently only dream of being.

Second, the Explorer will need to assimilate Netscape 2.x features as well as take feature-warfare to the next level by adding more of its own HTML tags.

Third, if Microsoft fails to persuade a strong enough contingent of third party vendors to develop solid plug-in modules,

it will have to continue in the vein of Virtual Explorer and develop its own line of plug-ins. Netscape had more than a year in lead-time over Internet Explorer, another gap that continues to be one of Netscape's strongest assets against Internet Explorer.

Look for the Explorer to continue to minimize the gap in the near future. At the very least, the intense competition between Netscape and Internet Explorer will serve to ensure that the overall web scene will continue to improve and that users will continue to be excited about the continually evolving web. ♦

VISUAL BASIC SCRIPT: MICROSOFT'S ANSWER TO JAVASCRIPT

Perhaps the most interesting feature (and potentially the biggest threat to Netscape) expected to be included in the next version of Internet Explorer is Visual Basic Script. Like JavaScript (currently included with Netscape), Visual Basic Script (VBScript) is a high-performance scripting language designed to create active online content for the World Wide Web. VBScript is a fast, cross-platform subset of Visual Basic that will be included with the Explorer at no cost to application, browser, and web users and vendors.

VBScript will allow web developers to link, embed, and/or automate a wide variety of objects within the HTML environment, including OLE Controls (.OCX files) and Java-based applets. All of these features on Microsoft's wish list will no doubt go a long way towards making the Explorer more competitive with Netscape.

Additional information about Visual Basic Script can be found at

The Robins Co. Visual Basic Resource Index:

<http://www.thor.net/~robinson/vb/vb.html>

Microsoft Corp.'s Introduction to Visual Basic Script:

<http://198.105.232.6/intdev/inttech/>

be little more than an integrated extension of these helper applications. By early 1996, however, the plug-in scene had matured from what was once just two basic clients into an amazing array of applications designed to help web browsers, and users, achieve unprecedented goals. Modules now available include inline Virtual Reality Modeling Language (VRML) browsers (WebFX and Virtual Explorer), real-time audio (Real Audio) and video (VDOLive) clients, viewers for new graphic formats (CMX Viewer and Lightning Strike), custom OLE controls for a Javaesque experience (NCompass and OPenscape), portable document (Acrobat Amber and Envoy) and multimedia development (Shockwave) tools, and many more. Still, the current selection of plug-ins is really not much more than a passing glimpse of what will likely become one of the hottest sub-industries of the Net in the future. In this section, we will review seven of the best plug-in modules currently available. For a complete and continually updated listing of the plug-in scene, check out Stroud's CWSApps List of Plug-in Modules at <http://cwsapps.texas.net/95plugin.html>.

WEBFX

Desc:	A feature-replete, superb VRML plug-in browser - currently the best on the Net
Pros:	Near flawless integration with your favorite web browser, excellent VRML capabilities
Cons:	Still a scarcity of quality VRML worlds on the Net, lacks VRML editing tools
Location:	ftp://ftp.paperinc.com/pub/webfx/windows/
Web Browsers supported:	Netscape 2.0 16-bit and 32-bit
Status:	Free beta release
Company:	Paper Software, Inc.
Information:	http://www.paperinc.com

The Virtual Reality Modeling Language (VRML) browser battle shows no sign of slowing down as many companies strive to ensure that their browser becomes the definitive client for this increasingly popular technology. Paper Software's WebFX plug-in client is the newest and arguably best VRML browser to enter the fray. With its arrival come many interesting new features, including inline support for VRML worlds — without even having to leave your Netscape interface! Still, the coolest features of WebFX are not expected to be released until later beta versions (including support for Java). For now, though, WebFX does the impressive job of seamlessly integrating VRML into the Netscape web browser, working its magic by embedding itself into the web browser so that it can launch VRML worlds internally and also so that it can take advantage of the web browser's superior features, including built-in security, bookmark management, multi-tasking, and OLE automation capabilities.

Even though WebFX has only recently left its bleeding edge beta status, overall this is already one of the most attractive and easy to use VRML browsers available. Navigation through worlds is surprisingly simple and can be achieved through either the mouse or the keyboard. "Fly by," "walk through," and (my favorite) "point to" navigational modes are currently supported; future versions will also allow you to

PLUG-IN TO THE FUTURE OF THE NET

by Forrest Stroud

Plug-in modules emerged in late 1995 with barely more than a passing glance of interest from most web users. Early plug-ins were nearly indistinguishable from the standard helper applications frequently encountered in web browsers. Initially it appeared that plug-ins were destined to

modify worlds as you move through them. Additional features currently incorporated into WebFX include full VRML 1.0 support, wireframe rendering, gzip support, physics based navigation with optional collision detection, HTML hotspots (network support), basic animation, background images, and more. The wishlist of features is extensive as well — sound and advanced animation, multitasking support for viewing multiple worlds at once, 3-D IRC chatting with VRML avatars, and in-place authoring of worlds. One additional feature that has been recently implemented is an animated variant of WebSpace's navigational "Viewpoints," which allow you to quickly jump to various parts of a VRML world (think of them as the VRML equivalent of a bookmark). Aside from a scarcity of VRML worlds to explore and perhaps the lack of VRML editing tools, I have very few complaints against WebFX. Overall, WebFX has accomplished the unprecedented — seamless integration of the HTML and VRML worlds — and as a result, I see a bright future ahead for both Paper Software and WebFX.

Macromedia's plug-in Shockwave technology bridges the gap between standalone Macromedia Director movie presentations and the interactive frenzy that is the Internet. As Jonathan Pajon, executive vice president of 2-Lane Media, says, "Shockwave opens exciting new doors for everything from original online entertainment to interactive product demos...The potential for this product is absolutely tremendous." Shockwave delivers high-impact, interactive multimedia productions to the World Wide Web for Netscape 2.0 users (versions for additional browsers are expected to be released later this year). Interactive graphics, audio, and video can be combined to form amazing Shockwave sites — image maps

SHOCKWAVE

Desc:	A new plug-in for viewing Macromedia Director movies with your web browser
Pros:	An unprecedented multimedia experience, interactive audio/visual presentations possible
Cons:	Shockwave sites are expensive to create, files can also be quite slow to download
Location:	ftp://ftp.macromedia.com/pub/shockwave/plugin/netscape/
Web Browsers supported:	Netscape 2.0 16-bit and 32-bit
Status:	Free evaluation release
Company:	Macromedia
Information:	http://www.macromedia.com/Tools/Shockwave/
Information:	http://www.paperinc.com

take on an entirely new dimension, interactive games (like the cool Toy Story concentration-style game at <http://www.toystory.com/toybox/shock.htm>) can be played over the Net, multimedia ads grace the Net with profound radiance and web front pages can finally shine in all their glorious splendor.

Shockwave has the potential of taking the web to the next level (like so many other clients, these days), and all you need



to check it out is the free for evaluation plug-in module and the Netscape 2.0 Beta 5 browser. Unfortunately, if you want to take part in creating your own shocking sites, you'll need to have a serious nest egg tucked away — Director alone (the Macromedia program designed to create the multimedia movie format for Shockwave) will cost you nearly \$800. In addition, as with any good thing, developing a Director movie is no easy task; unlike creating a web page, you won't be spending just a couple of hours in order to design an attractive site. For these reasons, Shockwave sites will likely be limited to well-heeled companies. Also, while the "Afterburner" add-on helps to compress the huge files for use on the Net, the result is still a large file that can take several minutes to download for 14.4 Kb users — a detriment that many VRML users are also entirely too familiar with. And unlike apps like RealAudio and VDOLive, Shockwave is nowhere close to delivering real-time multimedia presentations to the web. Yes, Shockwave does have what it takes to speed us on to the next generation of the World Wide Web, but the two questions that remain for the common nethead are whether or not we can afford the trip and whether or not we'll still be awake by the time we get there.

VDOLIVE

Desc: Multimedia plug-in for playing real-time audio and video files in Netscape 2.0

Pros: Real-time audio and video on demand, solid performance even with slow Net connections

Cons: Can still be quite slow for 14.4 Kb users, audio quality could be better

Location: <ftp://ftp.vdolive.com/pub>

Web Browsers supported: Netscape 2.0 16-bit and 32-bit

Status: Free beta release

Company: VDonet Corporation

Information: <http://www.VDOLive.com/newplug.htm>

Demo Site: <http://www.vdolive.com/pluginvdo2.htm>

The VDOLive plug-in module is similar in many ways to Xing's StreamWorks client. Both offer real-time audio and video playback over the Net with only a minimal amount of deterioration in quality, but only VDOLive offers seamless integration with your Netscape browser and inline support for real-time audio and video. Versions are currently available for both Windows 3.x and Windows 95/NT, with additional versions soon to be released. Even over 14.4 Kb lines VDOLive performs admirably and with only an occasional dropped frame. Given the impressive playback at these low speeds, as well as the superb audio quality, ISDN users and direct Net connectors will be even more impressed with the performance of VDOLive.

Unfortunately, because VDOLive is just emerging as a viable client, native VDO files are few and far between. VDonet's Armchair Connection offers a few files but is still quite limited. Beta testing for additional VDOLive servers has just begun and will hopefully increase the number of available VDO files in the near future. Again, like StreamWorks, this is an app on the cutting edge of technology and will only get bet-

ter in the future. It will be extremely interesting to watch as both VDOLive and StreamWorks evolve and compete.

REAL AUDIO

Desc: A Netscape 2.0 plug-in client that delivers real-time audio on demand

Pros: Real-time audio on demand; server, studio, and player programs all available

Cons: RealAudio clips must be run from a specialized server to run in real-time

Location: <http://www.realaudio.com/products/player/beta2.0form.html>

Web Browsers supported: Netscape 2.0 16-bit and 32-bit

Status: Freeware

Company: Progressive Networks

Information: <http://www.realaudio.com>

Demo Site: <http://www.realaudio.com/products/ra2.0/pn.htm>

RealAudio is the first client to hit the Net that allows you to download and run audio clips in real-time — the clips run *while* being downloaded, not after the entire (usually large) file is retrieved. It is also the first real-time audio client to offer plug-in support for Netscape 2.0 (in both Windows 3.x and Windows 95 versions). With the size of many sound clips (250+ Kb is not uncommon) and the sluggishness of the web, the "audio on demand" made possible by RealAudio is indeed a blessing for many users. By configuring RealAudio to run as a plug-in module, Netscape 2.0 will automatically play .ra files — sound clips are not only run seamlessly from your browser, they are also started almost immediately after clicking on the file. New features in the beta release of 2.0 include live broadcast capability, improved sound quality for 28.8 Kb and higher Net connections, and a Windows 95 version. Look for future beta releases to include bandwidth negotiation (for customizing audio quality to your connection speed), multimedia synchronization, and Java integration capabilities. Overall, RealAudio is a class-act app that will appeal to anyone who has ever had to wait an eternity just to listen to a thirty-second .au or .wav clip.

Virtual Explorer is Microsoft's answer to WebFX as an inline VRML browser for Internet Explorer. This plug-in client brings the VRML world to life for Internet Explorer users by offering an impressive array of features and quick performance, similar to the web browser itself. Features like "Viewpoints," which allow you to quickly jump to various parts of a VRML world (think of them as the VRML equivalent of a bookmark), collision detection and prevention, direct manipulation examine mode, camera animation (FlyTo mode), Microsoft's RealityLab 3D rendering engine for improved performance, hypertext (HTML) support, and multiple navigational modes make Virtual Explorer more than adequate as a VRML browser. Still, there are several features currently missing in this release, and early releases of the client do have their fair share of bugs. Features currently missing include VRML editing tools, wireframe rendering, online help documentation (another feature expected to be implemented in the near future), and support for sound and animation. However, Virtual Explorer is still in beta release

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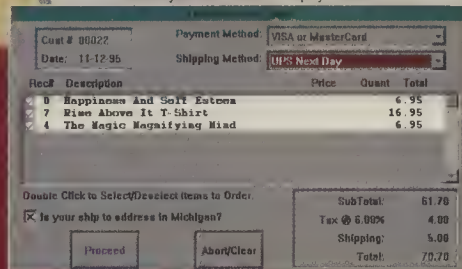
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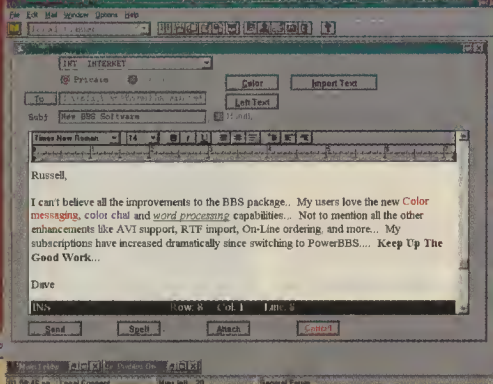


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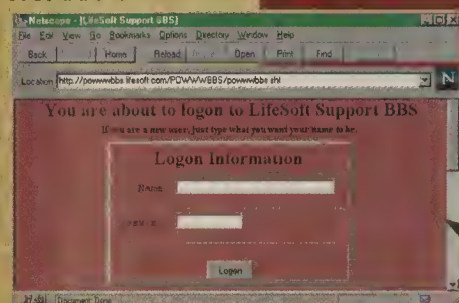
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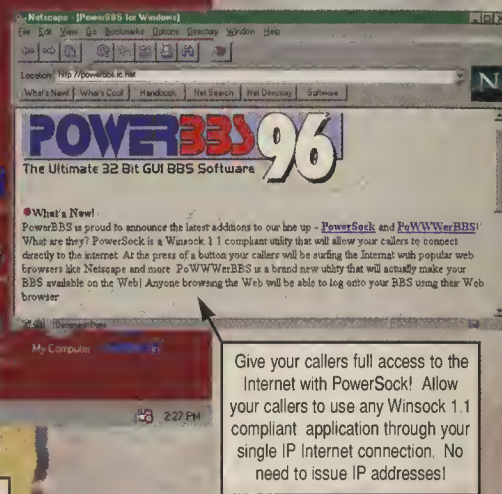
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GUI/ASCII/ANSI Connects	✓	✓				✓
Create 24-bit 5k-10k Resizable Previews				✓		✓
Play WAV & MIDI Files		✓				✓
Free Off-Line Mail Reader		✓				✓
GUI (RTF) Message Editor		✓	✓		✓	✓
On-Line Databases		✓	✓	✓		✓
Runs DOS Daars	✓	✓				✓
Direct Internet/Network Access	✓	✓	✓	✓	✓	✓
Internet Mail/Newsgroups	✓	✓				✓
Telnet/FTP Access	✓	✓				✓
MAPI Client	✓					✓
Multi-Room Teleconference	✓	✓	✓	✓	✓	✓
Full-Video AVI Support				✓		✓

Data compiled from reputable sources, November, 1995.

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Computer Shopper.

VIRTUAL EXPLORER

Desc:	The first plug-in exclusively designed for Internet Explorer - a cool inline VRML browser
Pros:	Near flawless integration with your favorite web browser, solid VRML capabilities
Cons:	Lacks VRML editing tools, examine, online help documentation
Location:	http://www.windows.microsoft.com/windows/ie/vrml.htm
Web Browsers supported:	Internet Explorer for Windows 95
Status:	Freeware
Company:	Microsoft Corporation
Information:	http://www.microsoft.com
Demo Site:	http://www.windows.microsoft.com/windows/ie/sites.htm

and is likely to see massive improvements and many additional new features by the time it is formally released. Overall, users of Internet Explorer will be quite pleased with the current Virtual Explorer offering but will no doubt be eagerly awaiting the next release as well.

Tumbleweed Software's Envoy plug-in viewer gives users the ability to view Novell's Envoy files from within the latest release of Netscape. Envoy documents can even be embedded within HTML documents and viewed with the plug-in module. Going a step beyond Envoy, the plug-in viewer gives users the capability to embed fonts, hyperlinks, indexes, and outlines in standard Envoy files. As with Adobe's Acrobat Amber Reader, you won't be able to create your own Envoy files with the viewer, but you will find an abundance of examples to check out on the Net. Envoy itself is a portable document format (like Adobe Acrobat) designed for the electronic distribution and viewing of documents created by "printing" document files with

ENVOY VIEWER

Desc:	View Envoy documents from within Netscape
Pros:	Easy and free viewing or printing of Novell's Envoy files
Cons:	Doesn't look or function as well as HTML documents on the web
Location:	http://www.twcorp.com/plugin.htm
Web Browsers supported:	Netscape 2.0 16-bit and 32-bit
Status:	Free beta release
Company:	Tumbleweed Software Corporation
Information:	http://www.twcorp.com
Demo Site:	http://www.twcorp.com/plgemb.htm

the Envoy driver (<http://wp.novell.com/busapps/win/tocen10w.htm>). Envoy documents ensure visual fidelity to the original content, formatting, and graphics created within the authoring tools at a fraction of the original file size.

Envoy presentations often exceed those of Adobe Acrobat in quality but are still no match for well-designed HTML pages. However, when coupled with an HTML page, Envoy documents can add additional dimensions to the web that were not previously possible. Perhaps the best example of this is the ability to embed fully functioning toolbars with the files, giving authors new directions for perfecting their web sites. Still, documents viewed with Envoy tend to suffer from the same jagged, hard to read fonts that also plague Acrobat. As with Acrobat, the Envoy viewer does excel at showing massive presentations and complex tables, charts, graphs, and the like — with its embedded toolbar, hyperlink, and indexing capabilities, Envoy files can often offer superior readability and manageability even over similar web documents. Overall, while HTML is typically a more attractive and more efficient use of paperless documentation, in the absence of an Internet connection, for massive documents, or as an aid in furthering the power and diversity of web documents, the Envoy viewer is indeed a very useful tool for the task at hand.

NCOMPASS

Desc:	A Windows 95 plug-in that allows OLE controls to work inside Netscape 2.0
Pros:	OLE Custom Controls can be embedded and executed from web pages
Cons:	Files are slow to download, Java offers many of the same features
Location:	ftp://oberon.educ.sfu.ca/pub/ncompass/
Web Browsers supported:	Netscape 2.0 32-bit
Status:	Free beta release
Company:	The ExCITE Center
Information:	http://oberon.educ.sfu.ca/NCompass/home.html

NCompass is the first Netscape 2.0 plug-in client to deliver object oriented OLE controls. The results of NCompass (in either its native browser format or as the plug-in module) are similar to HotJava, but the path taken to get there is entirely different — instead of using the Java language to create distributable "applets", NCompass uses Object Linking and Embedding (OLE) technology to create OLE custom controls (OCXs) that can be embedded and executed from within an HTML page. Like Java, the possibilities for this are nearly limitless. Current features include inline AVI movies, 3-D animations, sound effects, frames, and much more — who can tell what the future will bring for both of these apps. Unfortunately, the technology in NCompass is currently limited to Windows 95 and NT users. A Windows 3.x version should be available soon, but cross-platform compatibility with Macs and UNIX machines isn't planned for the near future. NCompass is an app that is definitely on the cutting edge of technology and will likely change the future of web browsing as we know it. It will be an interesting battle between NCompass and Hot Java. ♦

Web Browser Comparison

FEATURE	INTERNET EXPLORER	NETSCAPE NAVIGATOR
HTML TAGS	Excellent — HTML 3 compliance and exclusive tags like marquee, background sound, and inline support for AVI videos	Excellent — HTML 3 compliance and exclusive tags like frames, targeted windows, and super/subscript
PLUG-INS	Poor — Currently only one plug-in available (Virtual Explorer)	Excellent — 15+ plug-ins have already been released
APPLETS	Fair — Integrated Visual Basic OLE Controls and Java support coming soon	Excellent — Built-in Java support and plug-in support for OLE Controls
SECURITY	Excellent — SSL now and Secure Transaction Technology (STT) soon	Excellent — 128-bit RSA public key encryption utilizing the Secure Sockets Layer (SSL) protocol
TABLES	Excellent — Conforms to the HTML 3 standard better than any other browser, supports background colors	Very Good — Lacking only in the proper handling of width and table color tags
BROWSER SPEED	Very Good — Always loads a document's text completely before any graphics (appears faster to user) and is quick overall	Good — Loads graphics and text simultaneously, thereby appearing slower to the user, but Netscape remains a quick browser
BOOKMARK MANAGEMENT	Fair — Makes use of a Windows 95 folder for creating bookmarks, but lacks many features found in Netscape's bookmark system	Excellent — The bookmark menu contains all the features you'll need, including a what's new button and a complete set of bookmark management tools
INTEGRATED APPS	Good — Internal news and ftp clients, neither of which is outstanding. External e-mail link to MS Exchange	Very Good — Offers solid inline news, ftp, and mail clients, but all three could be improved
EASE OF USE	Excellent — Offers a user-friendly, attractive interface with an extensive collection of web pages for online help	Excellent — Also offers a user-friendly, attractive interface with web pages for online help
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PUBLISHING ON THE WEB

by Michael Erwin

Part 14 — PUBLISHING ON THE WEB

HTML EXTENSIONS — PROGRESS OR PLAGUE?

A few months back I covered HTML extensions. Remember some of those then “new” HTML extensions to Netscape’s Navigator. Simple little things like background colors, images, link colors and even the hated **<BLINK>**. As we learned long ago, things change especially in the computer industry. Well it’s time to cover some “new HTML extensions” again.

This time we are not just going to cover new HTML extensions for Netscape’s new browser, but also Microsoft’s Internet Explorer and IBM’s Web Explorer. Some of these new HTML elements have some great possibilities and sometimes you wonder why someone created some of these new elements and tags. A few of these new HTML elements and tags are even rendered correctly in several different browsers. Now that’s amazing.

One of the problems with specific HTML extensions is that if you compose your HTML pages so that only a certain manufacture’s browser can see the important content, you alienate others. So as someone once said, “Choose Wisely...”

Lets get started with these new HTML extensions.

A couple of the new tags I call “Why Tags,” as in “Why would anyone use this one?” One of these tags is Microsoft’s Internet Explorer **<MARQUEE>** tag. This tag is right there beside Netscape’s **<BLINK>** tag as an unnecessary evil. I want you to look at the following HTML lines:

LISTING 1:

Sample Marquee Code for Internet Explorer

```
<MARQUEE ALIGN=MIDDLE BEHAVIOR=SCROLL  
BGCOLOR=#FF0000 DIRECTION=RIGHT HEIGHT=  
20% WIDTH=80% HSPACE=10 VSPACE=10 LOOP=  
INFINITE SCROLLAMOUNT=2 SCROLLDELAY=20>If  
you dont read Boardwatch Magazine, you dont know  
Jack!</MARQUEE>
```

Did you get the number of that truck! This is one complicated tag. Let’s break it down.

Of course the tag starts with the tag name of **<MARQUEE>**. This way MS-Explorer knows how to handle the tag’s elements that follows.

The **ALIGN** element works just like it does in the **** tag. This tells the browser to **ALIGN** the text with the **TOP**, **MIDDLE** or **BOTTOM** of the **MARQUEE**..

The **BEHAVIOR** element tells the browser how the text should behave. **SCROLL** means that the text will scroll all of the way into the browser’s view and off the other side and repeat. The two other values for **BEHAVIOR** are **SLIDE** and **ALTERNATE**. **SLIDE** will cause the text to **SLIDE** from out of the view, scroll in and stop when it touches the other side of the browser. **ALTERNATE** causes the text to bounce between the sides of the browser. By the way, **SCROLL** is the default value for the **BEHAVIOR** element.

The next element is **BGCOLOR=#FF0000**. Most of you will recognize this element from the **<BODY>** tag. **BGCOLOR** is the Back Ground **COLOR**. The **FF0000** is three hexadecimal numbers. **FF** is the weight of the Red color, **00** and **00** are the weight of Green and Blue colors. So this will cause the text to be displayed on a red background.

As a side note, some of the new browsers use “Friendly” color names. For example, **BGCOLOR=#FF0000** is the same as **BGCOLOR=RED**. One of the problems with these “Friendly” color names is that Netscape’s Navigator v1.1x tries to convert this name into a hexadecimal value.

The element **DIRECTION=RIGHT** tells the browser to scroll the text left to **RIGHT**. The default is **LEFT**, scroll the text right to **LEFT**.

HEIGHT=20% specifies the height of the marquee, either in pixels or as a percentage of the screen height. In this example, the marquee will be rendered to 20% of the total height of the browser’s window. **WIDTH** controls the percentage of width of the marquee in relation to the browser’s display windows width, in our example 80%.

The **HSPACE** and **VSPACE** elements tell the browser how much space, in pixels, should separate the marquee from the surrounding text. **HSPACE** is the horizontal distance and **VSPACE** is the vertical distance. In this example, there will be a 10 pixel border all around the marquee.

The next element, **LOOP**, tells MS-Explorer how many times to loop the marquee text. **LOOP=INFINITE** will loop text continuously. If you put a number after **LOOP=**, the browser will loop that many times then stop the marquee.

SCROLLAMOUNT and **SCROLLDELAY** controls the speed of the marquee. **SCROLLAMOUNT** tells the

Michael lives in Huntington, West Virginia, with his wife Jacqueline and Paxi Baby. (Jackie’s Shar-Pei dog.) He has designed, built and administered network systems for over 16 years. Mike has organized and documented his 600-megabyte bag of tricks, tools and voodoo on a CD-ROM entitled, “The WebMaster’s Resource.” It is available for US\$24.95, plus US\$2.00 shipping in the United States or US\$5.00 elsewhere; send check or money order to 320 36th Street, Huntington WV 25702-1632. Please allow 4-6 weeks for delivery. For more information mailto:mikee@access.mountain.net

browser how many pixels to move the text between each redraw. The smaller the number the smoother and slower. 2 to 5 pixels seems to work well. SCROLLDELAY on the other hand, specifies the time between each redraw of the marquee in milliseconds. 20 is two-tenths of a second. So our marquee will move 10 pixels every second.

Look at Figure 1 to see what this will look like, without the motion of course. Isn't that amazing.

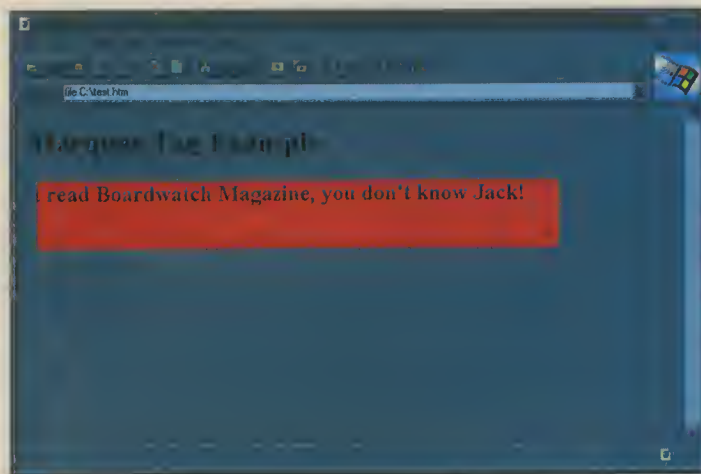


Figure 1: Static Rendition of the Code in Listing 1

This tag shares a problem with the <BLINK> tag. You don't know how fast the viewing computer is. So all your work to get that marquee speed correct might be thrown right out the window. No pun intended.

AUDIBLE TAGS

One of the new tags in MS-Explorer that I kind of like is <BGSOUND>. This is a nice simple tag. Look at the following line:

```
<BGSOUND SRC="laser.wav">
```

This tag will cause the browser to request the file **LASER.WAV** and the play the audio file. The file could also be a .AU or MIDI file. You can also add a LOOP element to the tag, e. g.,

```
<BGSOUND SRC="laser.wav" LOOP=5>
```

This will cause the browser to play the wave file 5 times. You could also do LOOP=INFINITE. The browser will play the audio file until that page is no longer displayed. This can be *really* annoying!

CLIENT-SIDE IMAGE MAPS

One of the greatest developments of HTML extensions in MS-Explorer and Netscape Navigator is something called Client-Side Image Maps. I personally feel this is a great new extension or feature. Remember a few months back, we covered Image Maps and how to create and use them. Those were Server-Side Image Maps. A Server-Side Image Map is a combination of CGI, HTML and a MAP file. Currently our Boardwatch homepage is a Server-Side Image Map. See Figure 2.



Figure 2: Server-Side Image Map

Here is, step by step, how a Server-Side Image Map works:

- 1) Browser requests a HTML document.
- 2) Browser receives the document.
- 3) The browser requests and renders the in-line images, one of which is a Server-Side Image Map.
- 4) When the user of the browser moves the pointer over the Image Map graphic, the pointer changes to a selection pointer. In most cases this is a little cartoon-style pointing hand. As the user moves the pointer, the browser is keeping track of x,y coordinates on the graphic.
- 5) The user "clicks" on the Image Map.
- 6) The browser then tells the originating WWW server the x,y coordinates of the "click".
- 7) The WWW server receives these coordinates, and looks up what URL the coordinates corresponds with. This lookup reference is stored in a MAP file.
- 8) WWW server then sends the browser the requested URL.
- 9) The browser requests and renders the new URL.

A HTML document that uses a Client-Side Image Map also contains the MAP file references described in step 7 above. The browser looks up the URL referenced by the x, y coordinates and sends the desired URL request to the server. The server does not have to look up anything.



The use of Client-Side Image Maps has several performance payoffs. First, it increases the response time of clicking on an image map and receiving the URL. Second, it decreases the load on the WWW server. Third, and smallest, of the performance payoffs is less network traffic.

Figure 3:
Image Map Used
in Listing 2

LISTING 2:

CLIENT-SIDE IMAGE MAP HTML CODE

```
<MAP NAME="guimenu">
<AREA SHAPE="RECT" COORDS="40,104,158,135" HREF="/webmaster.html">
<AREA SHAPE="RECT" COORDS="40,138,159,169" HREF="/services.html">
<AREA SHAPE="RECT" COORDS="40,171,159,201" HREF="/bbs/index.html">
<AREA SHAPE="RECT" COORDS="40,203,161,235" HREF="/sites.html">
<AREA SHAPE="RECT" COORDS="176,104,302,136" HREF="/support/index.html">
<AREA SHAPE="RECT" COORDS="176,138,303,169" HREF="/wwwstat.html">
<AREA SHAPE="RECT" COORDS="176,171,303,202" HREF="/gbook.html">
<AREA SHAPE="RECT" COORDS="176,204,302,235" HREF="/webcam.html">
<AREA SHAPE="RECT" COORDS="326,104,463,136" HREF="ftp://ftp.eve.net/pub">
<AREA SHAPE="RECT" COORDS="325,170,475,475,203" HREF="http://www.yahoo.com/">
<AREA SHAPE="RECT" COORDS="324,170,475,203" HREF="mailto:webmaster@eve.net">
<AREA SHAPE="RECT" COORDS="325,138,476,168" HREF="/cgi-bin/bsdi-man">
<AREA SHAPE="RECT" COORDS="104,305,412,321" HREF="http://www.bsdi.com">
<AREA SHAPE="RECT" COORDS="476,306,495,325" HREF="/green.html">
<AREA SHAPE="RECT" COORDS="0,0,499,345" NOHREF>
</MAP>
<IMG SRC="/icons/eve7.gif" USEMAP="#guimenu">
```

Enough talk about what Client-Side Image Maps are and how they work. Lets get started using them.

Look at Listing 2, this section of HTML code goes with the image map in Figure 3.

The first new HTML tag in Listing 2 defines the name of the map coordinates. In this case, the name is **guimenu**. The new **** tag is going to use this name. The **<MAP NAME>** tag works a lot like the anchor or **** tag we discussed in previous issues. If you don't understand, hang on for a few more paragraphs. It will become obvious what this tag does.

The next lines in Listing 2 follows this format:

```
<AREA SHAPE="RECT" COORDS="lx,ly,rx,ry" HREF="url here">
```

The first part of this line tells the browser to define an **AREA**. The **SHAPE** of the AREA is a **RECT**angle with **COORD**inates with numeric pixel values of Left X, Left Y, Right X, Right Y. So the browser creates a "virtual box" around that part of image.

At the time of me writing this, you can only use the **SHAPE** of **RECT**angle, or **SHAPE="RECT"**. But I guarantee you this will be changing shortly. Expect that in the near future or even by the time you read this, you will be able to use and define **CIRCLE**, **POINT** or **POLYGON** shapes.

The HyperREFerence element will tell the browser what URL to request. This can be any URL. Look at listing 2 for examples of using **HTML**, **MAIL** and **CGI** scripts.

These lead to the last **<AREA>** tag in listing 2. Notice that it says **NOHREF** and the x,y coordinates define the entire image in Figure 3. This just tells the browser that if the user clicks any where that is not defined in the previous **<AREA>** tags, not to do anything or NO HyperREFerence.

O.K., you ask what if the user clicks in a defined AREA that, by mistake, overlaps another defined AREA? Good Question. The *first* defined AREA is used.

The last **<MAP>** tag in listing 2 is the closing **</MAP>** tag. This tells the browser that there are no more defined areas for the MAP NAME of **guimenu**.

So far so good! Now look at the bottom of Listing 2. The **** tag tells the browser to get a GIF from the current WWW server from the SouRCe of **/icons/eve7.gif**. Once the browser gets the image it displays it.

The part of the **** tag that makes the whole thing work is **USEMAP="#guimenu"**. This simple little element tells the browser that if the user clicks on the image to look up the x,y coordinates in the MAP NAMEd "guimenu". Slick, huh?

Well now for the problem.

What happens when a browser doesn't support Client-Side Image Maps? Since it doesn't know what the **<MAP>** and **<AREA>** tags are, the incompatible browser ignores them. It will still display the Image, you just won't be able to click on it as you would an Image Map.

The solution is to both the old Server-Side and Client-Side Image Map HTML code into your HTML documents. AAAR-RRGGGHHH! You have to keep two sets of files up to date. But this really isn't that big of a problem. If you keep the **<MAP>** and **<AREA>** tags the same as Listing 2, you will only need to replace the lines after the **</MAP>** tag in listing 2 with:

```
<A HREF="/cgi-bin/imagemap/evemenu">
<IMG SRC="/icons/eve7.gif" USEMAP="#guimenu" ISMAP></A>
```

This tells the incompatible browsers to Anchor HyperREFerence the IMAge /icons/eve7.gif to the CGI script "imagemap" with a value of evemenu. It knows that "eve7.gif" IS an image MAP. Since the incompatible browser does not know what the USEMAP element is, the browser ignores it, or it should ignore it.

To the compatible browsers it does pretty much the same thing, except the USEMAP element is before the ISMAP element. So when the user clicks somewhere on **eve7.gif** the compatible browser looks for the **<MAP NAME="guimenu">** HTML inside of the same HTML document.

You can now use image map technology without having a WWW server process the "clicks" on the image. This could easily be used in new BBS interfaces, CD-ROM publishing or even text and image archives.

That's it for this month. Next month we will continue with the new extensions to HTML including FRAME HTML technology, and how to change one browser animated "surfing" logo in the corner.

Michael Erwin ♦

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WEB SERVERS DISSECTED

by Michael Erwin

MICROSOFT INTERNET INFORMATION SERVER

When David approached me about writing reviews of web servers, I thought about it for a few. I knew that there was a growing number of web servers out here, but have you looked around lately? There is a BUNCH of those things now a days. Since there is so many new web servers, I would have plenty to write about, and I like challenges...why not do it. So let's go!

Our first victim is **Microsoft's Internet Information Server v1.0** (a.k.a. *Gibraltar*). Since this is Microsoft's first try at a web server, I thought we should take a look.

The product is actually three packages. It not only provides a Web Server, but handles Gopher and FTP services as well. Internet Information Server will be included free with new copies of NT Server. Does this worry some of the other Web Server companies? You bet it does, as long as Internet Information Server is a world class and a capable web server.

you ever upgrade a Netware 4.01 server to 4.1, you will learn to read ALL of those little README files.

The file points out that you must remove any beta versions of Gibraltar and the Shell Technology Preview. You also must remove any other versions of FTP, Gopher, or WWW that you might have installed. That includes the FTP service that comes with NT, or the EMWAC WWW server that comes with the NT Resource Kit. You will need to log in as an administrator to remove any of those services.

Since this was a clean machine, I didn't need to remove anything. You will also need to log in to the server as administrator to install Internet Information Server. I also needed to install Service Pack 2 for NT Server v3.51. It was also included on the CD-ROM in the **WINNT351.QFE** subdirectory. After installing Service Pack 2 and rebooting, I was ready to install the Internet Information Server v1.0

Installation of Internet Information Server was like all of Microsoft's software. I ran **SETUP.EXE** from the **I386** directory. I was then presented with the Internet Server v1.0 Setup dialog box. The software default setup installs Internet Server Manager, WWW Service, Gopher Service, FTP Service, ODBC drivers and ODBC Administration. If you plan on using ODBC you will need to double click the ODBC icon in Control Panel to set up ODBC. This will allow your server to work with SQL servers. This is a NICE idea!

Most of the Internet Information Server files was installed in **C:\INETSRV**. Setup created a common group as you see in Figure 1. During the installation a user was created called "InternetGuest" so be aware of this.

ADMINISTRATION

Here is where the fun starts. After installing the software, open the Internet Server Manager icon shown in Figure 1. You should see three new services, FTP Publishing, Gopher Publishing and World Wide Web Publishing, as shown in Figure 2. IS Manager shows the computer name in the first column, service name, current status and comments. If you put the pointer on any of the available buttons, it will tell you what that button does.

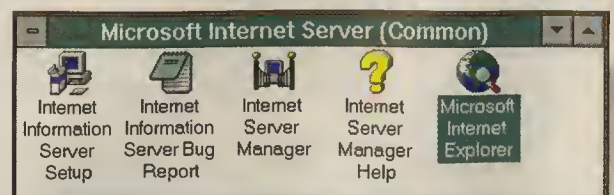


Figure 1: Common Group Created by SETUP.EXE

Michael lives in Huntington, West Virginia, with his wife Jacqueline and Paxi Baby. (Jackie's Shar-Pei dog.) He has designed, built and administered network systems for over 16 years. Mike has organized and documented his 600-megabyte bag of tricks, tools and voodoo on a CD-ROM entitled, "The WebMaster's Resource." It is available for US\$24.95, plus US\$2.00 shipping in the United States or US\$5.00 elsewhere; send check or money order to 320 36th Street, Huntington WV 25702-1632. Please allow 4-6 weeks for delivery. For more information mailto:mikee@access.mountain.net

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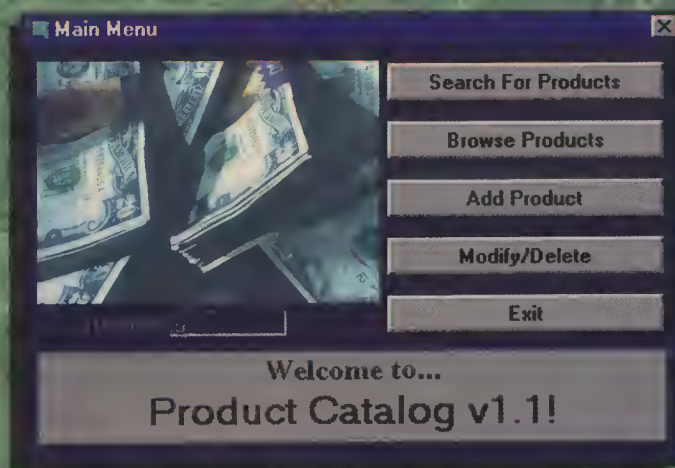
The hardware platform I chose for this review was one of the NT Server boxes I have running NT Server 3.51, build 1057. It may not be a screamer box but it is very responsive for most everything I do with it. Since it is a server, I run it in 640x480 resolution. This way I normally get the best server performance bang for the buck with existing equipment.

Microsoft sent the software on CD-ROM. This is the only way to install software in today's mucho megabyte software. The people at Microsoft included software for Intel 386, DEC Alpha, Mips, and Power PC.

INSTALLATION

To install the I386 version of Internet Information Server, I followed the instructions in the **README.WRI** file. And yes I do read the README files. I know this may disappoint some of you. But if

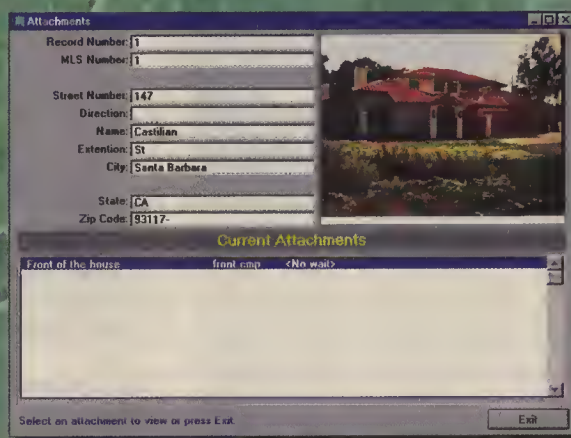
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Figure 2: Installed Internet Services

By clicking on the name of the computer to the left of a service name, you can click on VCR buttons to stop, pause, or restart that service. Once you have selected a service, you can click on the Properties button to open the Service Properties window. The WWW Service Properties box has four tabs; let's look at the Service tab shown in Figure 3.

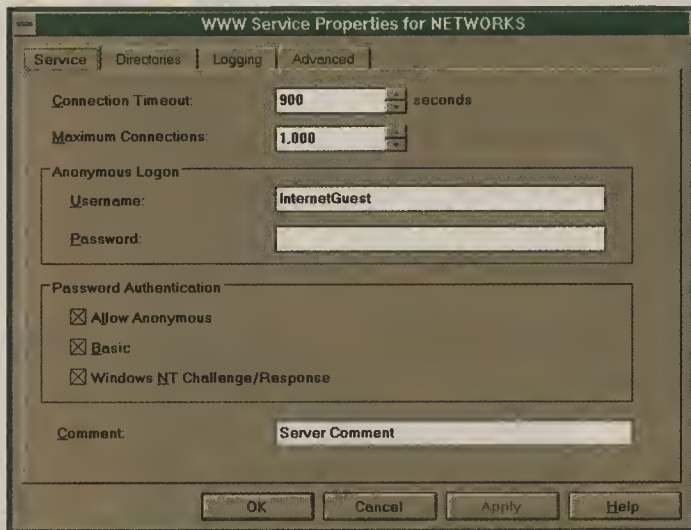


Figure 3: WWW Service Properties

We can change the connection time out and maximum connections. The Anonymous Logon section allows you to change what User name to put in the logs, and if you want you can set up password authentication. I will say that user administration is not as simple as WebSite by O'Reilly & Associates. So if you are looking into setting up authenticated users, Microsoft's server really isn't for you. In the future I'll bet that Microsoft will fix this shortcoming.

On the Directories tab (See Figure 4) in the Properties Box, is a special page. The top part of that page tells the server where certain directories are. Notice that your document root directory, e. g., <HOME> is C:\WWWROOT. So this is where you will put your documents. Notice the alias of /Scripts, this is your CGI-BIN default directory. You might want to add an alias for /cgi-bin to point to C:\SCRIPTS also.

This is also where you can specify what the name of the default document is. In most of the Web world, the name of that file is **index.html** or **index.htm**. Notice in Figure 4 that the default document page for Internet Information Server is **Default.htm** — I would personally change that to the standard **index.htm**. Also notice, at the bottom of Figure 4, that directory browsing is allowed.

If you click on ADD or EDIT PROPERTIES, you will find the Directories Properties sub-tab. This page might be of interest if

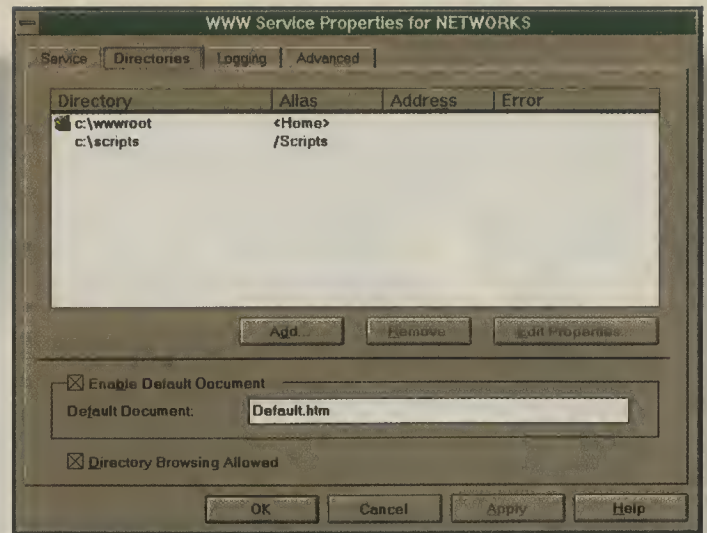


Figure 4: Setting Directories and Aliases

you want to set up virtual servers. It will allow you to have multiple virtual web servers with different IP addresses. Nice and simple.

The Logging tab controls how Internet Information Server handles the log files. Nothing real complex here, except that you can also set up the server to log everything to an SQL or ODBC database. I particularly liked this feature. It would be nice if you are running a corporate site. However, you take a performance hit when using this option. You might want to increase the horsepower of your Internet Information Server box.

If you look through the help system and the readme files, you will learn that there is a program in the \INETSRV\ADMIN directory called **CONVLOG**. This program is the Internet Log Converter. It will allow you to convert the services log files to either the EMWAC log files or the common log file format. This is a weak point right now. With the standard NCSA, Netscape, CERN and WebSite software, you can use either the included statistics analyzer or **wwwstat**. At the time of my writing this, I have not found a log file statistics generator for Microsoft's server.

The Advanced tab (see Figure 5) allows you to limit who accesses your HTML documents. You can block them via IP address. You can lock out or limit it to everything from a class A, B or C networks, to a specific PC. This is great if you want to limit access for an Intra-network.

Internet Information Server also has something I haven't seen on any other web server. Notice, at the bottom of the Advanced tab, that you can limit how much network bandwidth the server uses. This is a great feature! Why? You can build the server so that it only takes an allotted amount of bandwidth. This is great for a customer's server located on your site; you can provide metered usage!

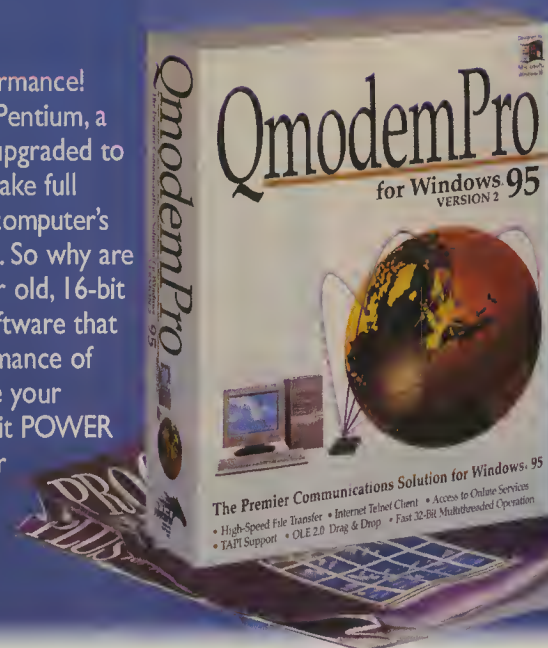
CGI HANDLING

Internet Information Server supports the standard CGI (Common Gateway Interface). Currently Internet Information Server supports only compiled 32-bit CGI applications, Visual Basic and NT Perl. You will need to be aware of this limitation if you get some of your CGI scripts off the net. Make sure that those CGI scripts are compiled as 32-bit apps.

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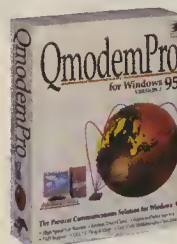
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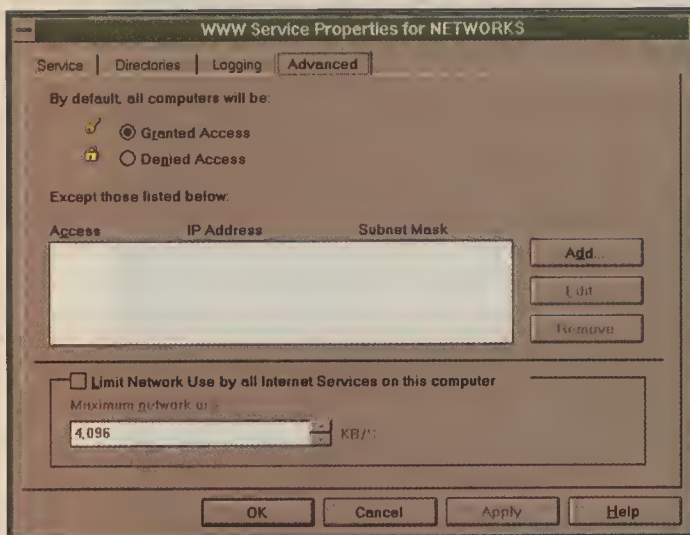


Figure 5: Access Control Features

When you are setting up CGI for Internet Information Server you need to use a program called **REGEDT32.EXE** to modify or to add mappings. Currently the default install assumes you will only be using BATCH files and ODBC files as CGI scripts. The documentation is a little lacking in this area. The default interpreter associations include only:

.bat cmd.exe
.idc httpodbc.dll

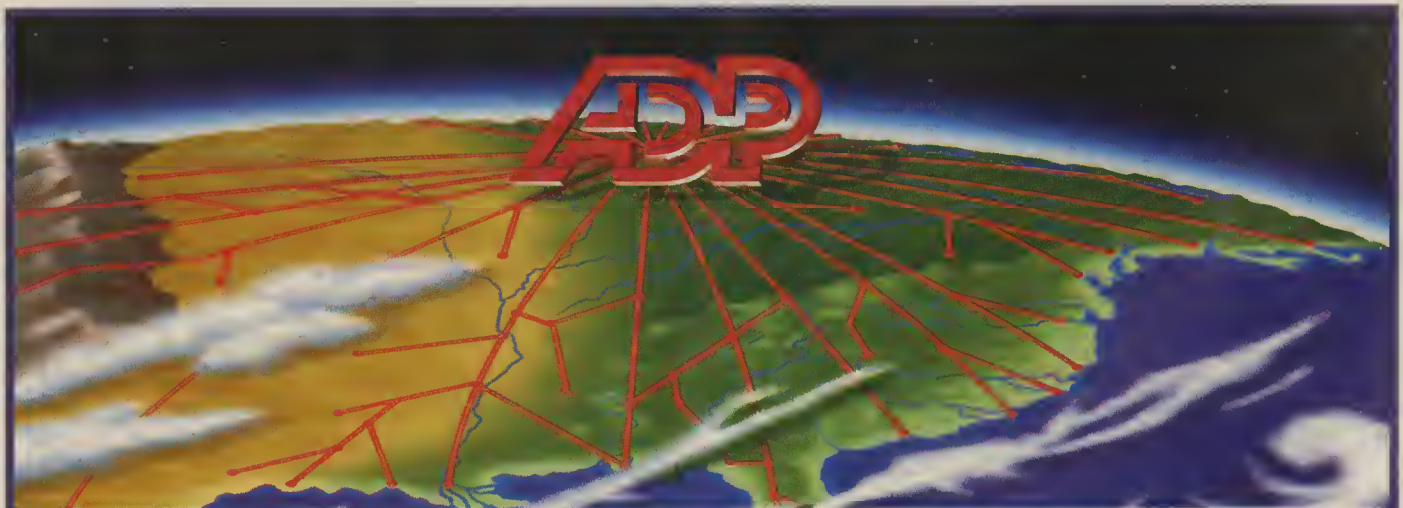
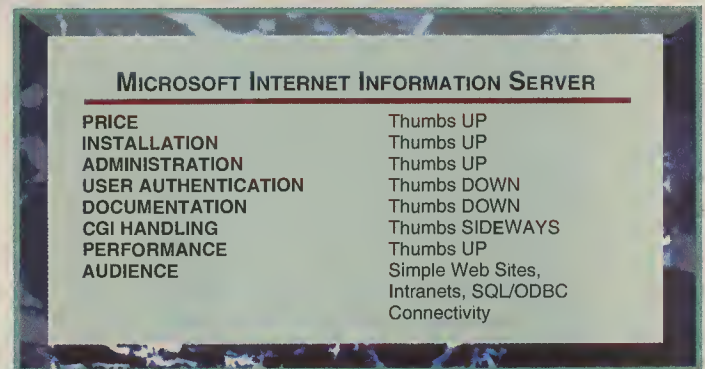
You will also use **REGEDT32.EXE** to modify the MIME mapping. If your server provides files that are in multiple for-

mats, you must configure your server's MIME-mapping to ensure that your server maps the file-type correctly when returning the file to remote browsers. If MIME mapping on the server is not set up for a specific file type, your client's browser may not be able to retrieve the file. When you change any of these associations you will need to reboot your NT Server for those changes to take affect.

PERFORMANCE

The server as a whole performs very well. It's fast on the modest system I used. I turned off all of the services that I didn't need. You should also remove the bindings to the network adapter, or any service you don't use, for example IPX and SPX. You can change this in the Bindings feature in the Network Control Panel.

This server, as configured, would be great for a simple web server. It has the ability to burn the bandwidth to the net. But it also has that great feature of limiting bandwidth usage. (Hey Netscape and WebSite are you listening?) ♦



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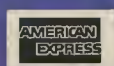
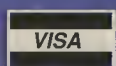
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INTERNETICA



DR. BOB by Bob Rankin

ZEN AND BLARNEY

Brendan Kehoe is one of the good guys. As author of the classic *Zen and the Art of the Internet* guide, developer of the *Archie* file-locator client software, archivist for the *Computer Underground Digest* and general doer of good online deeds, Kehoe personifies the phrase "net citizen."

Bob Rankin, known as "Doctor Bob" in the online world, is a writer, computer programmer and consultant who enjoys exploring the Internet and sharing the fruit of his experience with others. Bob is co-driver of *The Internet TourBus* and author of "Accessing The Internet By E-Mail", which has circulated widely on the Internet, and is available in 15 languages. Send e-mail to BobRankin@MHV.net or visit him on the web at <http://csbh.mhv.net/~bobrankin>



Brendan Kehoe, author of *Zen and the Art of the Internet*

Kehoe is a soft-spoken young man with a fiery Irish spirit who seems most content when he is doing something for others. While in college he wrote the *Zen* guide to help fellow students understand what he had learned about the Internet, and this free guide became an instant sensation. When he's not off doing volunteer work in the community or answering a seemingly endless stream of e-mail from fellow Internauts, Brendan works for Cygnus Support in Mountain View, CA as manager of the C++ Development group.

Born in Dublin, Ireland some 25 years ago, Kehoe came to America when he was 4 years old and devel-

oped the computer habit not long afterward. But the road that led him from Commodore to SparcStation was not without a few bumps. In December of 1993, Kehoe sustained severe head injuries in an automobile accident and was not expected to recover. Miraculously, he survived the crash and emerged with a new outlook on life and what really matters.

Recently I talked with Brendan about Zen, the accident, and his life both on and offline. Here's what he had to say...

Doc: *What was it that attracted you to the Internet?*

Brendan: Just being able to find things out really quickly. In high school I was blowing away my physics teacher by bringing in a copy of a technical report only a day after some scientist had announced a major discovery. It was really neat that you could find that much stuff that quickly. Now the problem we're running into is how to organize that massive amount of information.

Doc: *You had a brush with death about two years ago. Can you tell me what happened that day?*

Brendan: I was in rural Pennsylvania, coming home from a friend's house on New Year's Eve of 1993. Whatever we were talking about, it so captivated us that I went right through a stop sign and was hit by a Jeep Cherokee in the driver's side of the car. We went into a spin and ended up being jammed about a foot into some guy's house.

Fortunately, a lady who was following us saw the whole thing and was able to call 911 on her cellular phone. I was flown by helicopter to the hospital at the University of Pennsylvania, where I had three sessions of brain surgery. I was in a coma for three days and after I came out of that I was in something

called an aphasia for about three weeks. I had an attention span of about 2 seconds — I was swearing, talking in numbers — actually consistent numbers, my friend said. Then one morning I just magically woke up, rang for the nurse and asked for a newspaper to find out what day it was and why I was there.

Doc: *I understand you're considering a move from software engineering to teaching elementary school.*

Brendan: One of the interesting results of the whole accident thing was that it really pointed out the fragility of life to me, and that you should do things that you're going to be gratified for having done years later. Being a software engineer is fine and I can do all this cool stuff, but I don't get much out of it. And I know that 2 or 3 years down the line everything I do will be completely changed.

So as all this fragility of life stuff was hitting me I started really enjoying working with kids, reading things with them and things like that. I started going into classrooms to watch teachers work, and figure out what kind of stuff I'd be able to do and how it would feel. I was also volunteering at a support network for battered women — I'd keep the kids busy while the moms were in with a counselor. It was really interesting — escaping from a C++ meeting, spending an hour so playing with the kids and then returning to work. The difference between the two was amazing, and I started thinking "I suppose I could do this."

Doc: *So you're changing your occupation to a vocation...*

Brendan: Exactly. Everybody's telling me "Why you gonna do that — there's no way you can get anywhere near the money you're making now." But it's a trade-off depending on what you really want out of life. If I can figure out a way to live off a teacher's salary and continue writing Internet books it could work. It better!

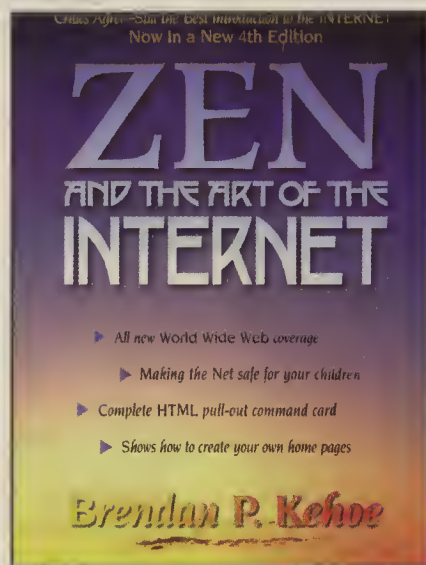
Doc: *About your book... the title is an obvious play on **Zen and the Art of Motorcycle Maintenance**; is there any special significance to the "Zen" thing for you?*

Brendan: I had actually just finished reading **Motorcycle Maintenance** when I was finishing the first draft of my book, and I realized that a lot of the stuff that Robert Persig did in his book was to encourage people to learn the

basics and then go off and learn more by themselves. This was the approach I was taking with **Zen**, to give everybody the raw tools they need without deluging them in hundreds and hundreds of pages of random stuff — instead relying on them to take what I've given them and learn it in their own way.

Doc: *You were a student when you started the book, right?*

Brendan: Yup, at a place called Widener University in Pennsylvania. While I was a student there I took on the job of becoming their UNIX system administrator. Widener had just gotten hooked up to the Net and nobody could figure out what in the world to do with it, so I started trying to figure it out for myself.



I wasn't actually reading anything from anyone — just going exploring and trying all these different commands. When people saw that I was figuring it out I got hit with so many questions I was going nuts. So I thought why not just write it down, and that's where the idea of the online first edition [of "Zen"] came from.

I took about four months of writing down all the questions I was being asked and putting it in a form that was usable. And after making it available to students at Widener I realized that people everywhere must have the same questions. So I figured "what the hell" and put it out on the Net.

About two and a half weeks later I got a call from David Farber at University of Pennsylvania saying "How would you feel about making this a published book?" That was February of 1992, and I had the galley copy done by mid-April.

The 4th Edition [ISBN 0-13-452914-6, Prentice Hall PTR, \$23.95, (800)382-3419] now has a chapter on the Web, a section on how to write your own home page, and an appendix on how to safely introduce your kids to the Net.

Doc: *How many copies of the "Zen" book have sold so far?*

Brendan: I actually don't know. In January of 1994, it was something like 75,000 copies and another 20,000 or so of the 4th edition were sold last year.

Doc: *When you published "Zen" it attracted a lot of attention. What kind of opportunities did that present, and how did it change your life?*

Brendan: It's been really surreal - it still blows me away when I go into a bookstore and see my name on the spine of a book. It still hasn't quite settled in. What's really nice is that having the book out makes it so that people feel like "Oh, maybe he can answer my question" and I get all these random questions in my e-mail asking how to do this, that or the other thing. And I don't have any problem answering them because I figure they don't know me, I don't know them, but somehow we're able to help each other.

Doc: *I got a kick out of the opening paragraph on your <http://www.zen.org> site:*

"The Zen Internet Group is a very small, covert group of highly technical people struggling to overcome the drudgery of day-to-day life and burrow down into the world like a spoon into a banana split, splitting apart the atoms of closed-mindedness and tie-dyeing the very fabric of the universe, venting our frustrations at working on computers all day at work by coming home and working on a computer."

Doc: *Is the Zen Group for real, or is it just a whimsical thing?*

Brendan: I liked the idea of getting the **zen.org** domain so I thought I'd make up the Zen Internet Group in the hopes that maybe someday it will actually exist. We do get deluged with people asking us about the Zen religion, though.

Doc: *You've got a nice collection of "kids stuff" on your web site. Tell me how that came about.*

Brendan: Originally it was just interesting things that I'd found, and I real-

ized that they were all over but they weren't in any one place. Even Yahoo hadn't been set up completely at that point. I realized that people might not be seeing good uses of the Net if it's all spread out like that, so I just put them all together and wound up with a mention in Yahoo and several other places.

Now I'm getting lots of people sending me mail with suggestions for additions, and there are about 2000 hits per week. It would probably be better if I had a faster modem on my machine!

Doc: *Given your interest in kids and their welfare, what's your take on protecting them from inappropriate or indecent materials on the Net?*

Brendan: Well there are a few solutions now that make it really easy for people to do it. There's **SurfWatch** and **NetNanny** which cause a web browser to deny certain pages, but I always try to explain to people that they should consider the Internet like a playground. They wouldn't encourage their kids to just run off and play all by themselves — and at the same time they shouldn't let them go on and use the Internet completely unattended. Even if it is right there in the living room, they don't know what's going to be on the screen.

There are a lot of parents that don't feel as comfortable with computers as their kids do, but that's an opportunity to let the kids show off how great they are and how well they can do all this stuff. The best approach is for parents to actually do it along with their kids, and to explain that the same rules apply for both strangers on the street and strangers on the Net.

I'm actually working on a kids book now, as part of a series of Zen books, which should come out around the end of this summer. It's called **Zen and the Art of the Internet — Parents & Educators Guide**. It expands on how to introduce kids to the Net and gives teachers ideas for integrating the Internet in their classrooms.

Doc: *Do you see any room for a legislative solution to the problem?*

Brendan: Not really. There could be some approaches but the problem with most of the ones that are out now, such as the Exon bill that's causing all the controversy, is the Internet is a global medium. So any legislation we pass here in the U.S. wouldn't mean anything because a person could set up a site in Sweden or Finland or wherever and

jump over the law by operating outside the country.

Doc: *A lot of people see you as a kind of Internet hero. Who do you see as the people who have done the most good for the Net?*

Brendan: There's a group up in Canada called Bunyip that did Archie. Alan Emtage was one of the key guys there. The way that they set up Archie, along with the way folks at University of Nevada-Reno did Gopher, together helped to really spawn the growth of the Net and all the stuff that's happening today.

There's also David Farber at U. Penn who seems to be at the forefront of everything; and both Mitch Kapor and John Perry Barlow at EFF who I admire for their speeches on privacy and the Internet.

Doc: *How do you use the Internet on a personal basis?*

Brendan: I use e-mail, probably more than I should. I use it to be able to work from home easily. The other day my girlfriend came down with strep throat and was wondering what to do about it. I was able to do a Lycos search and find a list of ten key ways to deal with it without getting a throat culture.

I also like finding information on certain musicians and writers. There's a newsgroup for Anne Rice, so I'll look there to see if she'll be making any appearances in the Bay area.

Doc: *How do you see the Internet changing society or the way we live by the turn of the century?*

Brendan: I'm convinced that before the year 2000 we'll come up with a way for more people to afford it — it's still too elitist. You still need a really nice computer to be able to do it. There's a project going on out here in Sunnyvale now where you can get an Internet connection using just your existing cable and television [no computer required] for \$30 a month. It's an interesting sign that they're trying to come up with ways to make it less expensive.

One thing I'm positive that's gonna happen within the next year is that we'll solve the whole digital cash and electronic money thing. Right now there are three or four different approaches to doing secure transfers over the Net. Some of the projects underway now include really big names like Sun Microsystems and Microsoft so even by

the end of this year there should be some internationally agreed upon standard for doing secure money transfers, banking, and buying - it's just going to go right up through the roof.

Doc: *Any parting comments, oh great Zen Master of the Internet? :-)*

Brendan: When people ask me, "Is the World Wide Web it for the Net?" I have to tell them no, because it's just like if they'd asked me two years ago if Archie and Gopher were it. It's only limited by the human imagination and there's no way that our imaginations are going to stall on something like the Web. And now we've got Java coming up. There's always something new coming.

Some people have asked me if there will be a 5th or 6th edition of my book and I tell them in all likelihood there will because this thing [the Net] changes so quickly. Even now, "Zen" is out of date on some things because it doesn't do heavy coverage of Java.

There's no way anybody can be exactly up to date unless they sit in front of their computer with ten other people typing simultaneously. I've been saying if people wanna use the Net, go in and use it now — don't wait for it to get better. It's going to consistently get better and you're never going to find a stalling point.

The Internet itself is going to have to change soon, because we're running out of addresses. There is a proposed 128-bit addressing scheme and people on the East coast are experimenting with a gigabit connection now. So yeah, it's gonna really transform, but there will be a lot of constants. E-mail will still be e-mail, probably very similar to the format it is now. We'll see a growing up and a firming up. Even if you look three years ago at the way things stood then compared to now it's amazing.

It's funny when you hear Vint Cerf (one of the chief architects of the TCP/IP protocol) talk now - he can't believe the way some of the things have grown. And I'd love to know what Marc Andreessen really thinks about what Mosaic turned into, other than the fact that he's a billionaire now...◆

CONNECTING WITH THE ZEN MAN

mailto:brendan@zen.org
http://www.zen.org/~brendan

ISP TALK

by Bob Rankin

THE ACCIDENTAL ISP



**Chris McCracken
and partner/fiancee
Nicholle Bernsee**

the student body. His plans were to run a TeleFinder BBS, throw on a 56Kb line, and hopefully snatch a few AOL customers from the college and local community. But when he called StarNet to get a price on the 56Kb line, he got more wire than he bargained for.

Just so happens that StarNet was under contract to provide service in Rockford, and they asked McCracken if he'd like to have a T1 instead. A bit shocked and surprised, he jumped at the opportunity. "I had heard the term ISP, but I figured those were big companies with lots of money and machines," McCracken said. "But when we found out we could get the whole thing started for around \$12,000 it was too good an opportunity to pass up." **Firecraker.com** will be one of just three Mac-based ISPs in the country, running Tenon Systems Mach 10 UNIX on a Quadra 630 and an LC 575 tied together via ethernet.

Under the terms of the agreement with StarNet, McCracken and his partner become a full-fledged ISP shop but will run two domains on their network — one of their own and a StarNet domain too. They are free to market their own service to the locals, while StarNet markets regionally and funnels new customers in the local calling area to them. (McCracken's company is paid a percentage of the revenues from the StarNet customers on his machine. The customer gets a local access number, and both companies benefit from the cooperative arrangement.)

"They are bankrolling our growth," McCracken says of StarNet. He still can't get over the fact that two companies who should be competitors are actually helping each other make money. McCracken gives StarNet a lot of credit for helping him get his own business rolling, and for the sweet deal on the T1 from MCI (Less than \$1000 a month). "If I had called someone else besides StarNet, I honestly think I'd be working 9-5 right now, which is my biggest fear in life!" says McCracken.

For this young man, achieving some measure of success means a lot. He describes himself as having been an "unruly youth" — the prodigal son of the family — so he is all the

Christopher McCracken is a 23-year old entrepreneur who is bringing the Internet to corn country. Although he kind of stumbled into the ISP business, he's not too upset about the fact that there's a long line of customers waiting for him to throw the switch on his T1-connected POP in rural Rockford, Illinois.

McCracken originally planned to start a BBS as a way to pick up a few bucks, because he lived not far from a college (Northern Illinois University) that does not offer Net access to

more determined to make this business work, and to help others in the process. "It's a family owned business," he says, "and we have plans to do a lot of community service-oriented things." McCracken plans to offer free Internet service to local schools as a way to give back to the community, and eventually to enter into cooperative agreements with other small ISPs that will help them in the same way that StarNet helped him.

McCracken says he was always self-employed to some degree, but never very successfully. "There was never anything I could get someone else interested in." Until now, that is. His partner Andy Kida (who financed most of the startup costs with personal funds and a bank loan) is the creative financial whiz that keeps the bills paid while McCracken runs the technical side of the business.



**Andrew and
Kristen Kida**

The duo is convinced that demand for the service in their area "can't do anything but grow exponentially", so they plan to expand Firecraker.com by installing a POP right in DeKalb where the college is located, and then expand steadily over time in the local area. They're keeping it simple by offering just the dialup PPP service with free home page (no shell accounts) for \$25 a month flat rate. They'll also offer web design and publishing services to business customers.

Commenting on his original plan to run a simple BBS, McCracken remarks: "I still do like Telefinder, but once I taught myself HTML I realized that there's nothing in Telefinder that I can't do with the Web." Sounds like further evidence from the trenches of the direction the dialup industry is moving.

Like many startups, McCracken doesn't have much of an advertising budget so he's relying primarily on word of mouth to bring in new customers. But he's also doing some creative bartering by offering free web pages to local computer user groups and radio stations in return for good publicity and free radio spots advertising his service. There's also a possibility that they'll set up a web-based radio request form, so local surfers can ask to hear their favorite tunes while they're online.

You have to wish anyone well who's doing something to stretch the wire into rural areas. And Christopher McCracken has the right attitude to get it done. When I asked if he was worried about the phone company taking over his turf his reply was "By the time they get up to speed in northern Illinois, I'll be entrenched. I defy them to take me out!" ♦

FIRECRAKER.COM VITALS

Firecraker.com, located in Rockford Illinois, runs a Mac Quadra 630 (20MB RAM) as a PPP server and an LC 575 to provide FTP and Web service. The Ethernet network ties into a Livingston Portmaster and Motorola T1 CSU/DSU, which is connected to the T1 line. Contact Firecraker Enterprises or visit their website for registration details.

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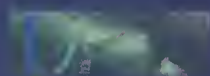
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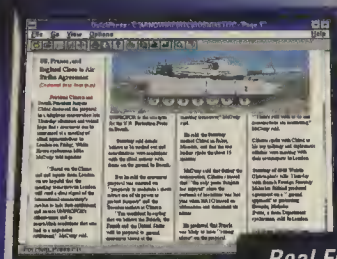


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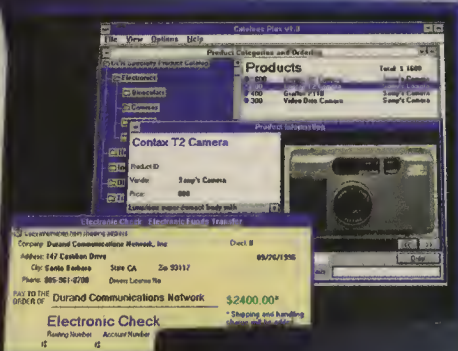
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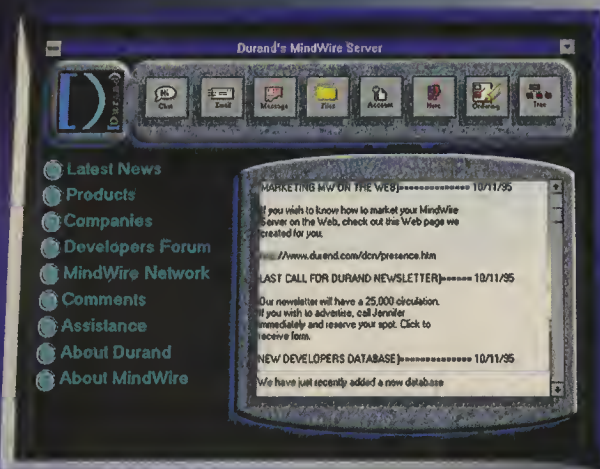
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NET PROFIT

By Phil Becker

WE'RE NOT IN KANSAS ANYMORE — BUT THEN WE REALLY NEVER WERE... THE SEARCH FOR PERSPECTIVE IN A TIME OF RAPID CHANGE

It could be the understatement of the century to say that things are moving fast in the online world. But while it's easy to see the motion, it's not so easy to see just what it all might mean. Clearly there has

never been more opportunity, but it's not easy to keep perspective on it. Normally experience helps with perspective, but in times like these experience can mislead as well as inform.

You've heard that there are more people and money online now than ever before, and that many people are destined to win big. It's true. How true? Well here's some perspective on it...

At the time I write this, over half of all the people who use the Internet today hadn't seen it at all a year ago. In January, the total of all people who went online for the first time within the past year exceeded the total of all people who had ever been online in human history prior to 1995. Everything there has ever been in the way of an online business is a small part (both in dollars and numbers of people) of what will exist in the next 18 months. That allows huge successes to be built by people who still don't even know they will be playing the online game. That kind of rapid growth to such large numbers means that if you can get a tiny portion of this new business, you will have more than anyone has ever had before. But it also means there will be several stampedes and you rightly fear being trampled.

Another way to try to comprehend what's happening is to realize that it's gotten so big that a user on your system can make more money than a successful online sysop made a couple of years ago. One example of this

is a user on one of my customer's systems who makes dolls at home. She couldn't sell the dolls she loved to make very well, until she put up a personal web page on his service. Now she's making nearly \$100,000/yr selling her really cool dolls, and you have to work to find her "personal page" in the vast noise of the exploding Internet. It does NOT take 100,000 hits/day to win, it just takes a good idea well matched to its audience. Opportunity literally is everywhere, and most of the wins will be made by very ordinary people.

"Opportunity literally is everywhere, and most of the wins will be made by very ordinary people."

.....

Anxiety and opportunity always lie in the same place, so how can you assure that your anxiety will lead you towards opportunity and not just to watching others win while you miss the ship when you knew it was coming in? How can you surf through the change, profit from it, and not get chewed up by it? The answer is two-fold — learn the realities of the technology and build good personal networks among those who use it. Only these two things will give you the perspective that will leverage your skills and lead you to the opportunity and away from the dead end alleys that will form, look great, and then close out several times in the next couple of years.

Those who have an investment in online technology more than a year or so old are feeling pressure to make the "hold em or fold em" choice of leveraging what they have or changing everything they are doing. Not just BBS sysops, but pioneering ISPs as well are seeing that the cost of their operations could be dramatically lowered with newer equipment, software, and techniques. This is reinforced by the new guy just down the block who opened the doors with new software and hardware and who appears to be able to make money pricing the same services lower or who has features you can't match. The odds are that neither is quite the right move, but the pressure can become overwhelming when you don't have perspective.

Meanwhile, those who have only just begun to look at putting up an Internet server or provide public access online service are desperately trying to buy the "right stuff" so they won't have to change everything just when they figure out how it works. And just when you think you have it all worked out, you learn there is one more piece that no one told you about that costs as much as the rest of it put together! How many more things have they not told you? Does it really have to be this complex and mysterious? The learning curve appears end-

less, and you feel the pressure that others will learn faster than you do and close out your "window of opportunity" and raise the barriers to entry.

In short it's a time of great fear, great opportunity, and much anxiety born primarily from a lack of knowledge or understanding of one or more parts of either the new technology or the world into which it is deploying. Those who understand the technology are rarely the same ones that can see the business opportunities clearly. The result is often a "herd

Phil Becker lives in Aurora, Colorado where he is President of eSoft, Inc. and Secretary/Treasurer of One, Inc. He sits on the board of Durand Communications and is very active in and excited by computer communications of all types. In such spare time as he has, Phil enjoys attending his favorite sports which are NHL Hockey and IndyCar and NASCAR auto racing. You may reach Phil via email at phil@plb.com

instinct" to follow the largest pack you can find and do what they say they are doing. You might still be lost, but at least you won't be alone. Then again, if you follow you can never come in first, and part of you secretly knows that the only real answer is the proper marriage of the technology with your knowledge of the world.

Is the web really the best way to do your job? Maybe yes, maybe no. Do you need modem access, Internet access, Intranet access or a combination? Will the technology you pick scale up to larger sizes? Does it need to in your case? Only understanding both the needs of those who use your system and the technology will give you the right answer. That takes both technical knowledge and networking with people who have used it — preferably face-to-face.

In the absence of that, you can only follow what looks like the biggest crowd with a hopeful look on your face. When you know internally you are only following others, but you don't exactly understand why, the tendency is to ridicule any other approach. In this way you hope you can force the world to abandon all other methods, thus leaving your choice in the winning position by default. Good luck; some of the others DO know why they are using that technology and it just may be that you should find out what those reasons are.

So in the end, you know that you'll either have to figure out how to match the technology to an audience that accepts it because of the way it improves their life, or trust to luck. I welcome luck, but I don't borrow money against it.

By now you are saying "Phil — I thought you were going to help me. All you've done is made me unable to forget that I'm lost and scared. A lot of people are going to win, but I fear I won't be one of them. Tell me how to win!"

WINNING

As I indicated earlier, the answer lies in educating yourself on as many of the new technologies as you can, to a depth that allows you to know what each provides and what it doesn't. Also, you need to develop a strong personal network of people who are active in the development of the online world in various areas so that you can benefit from the steady stream of real world experiences they will have. Preferably you should have a way to spend time face-to-face with a variety of people who

use this technology for a wide assortment of real-world purposes so you can try your ideas out on them to see if you are on the right track. Small modifications can make a huge difference in most online systems if they reflect a better way of enabling your users to accomplish their goals.

Internet trade shows are booming of late, precisely because the need for education and personal networking has never been higher. But they are largely a disappointment for those looking to install server sites, provide online service, or sell products for those purposes, as they cater primarily to end users.

No one who is going to put up an Internet server site or become an Internet Service Provider will find these shows satisfying. They are like a nice, glossy catalog that shows you products and concepts from a user perspective, but doesn't give you much information on how you would combine them or use them to do your job. It's exciting to be in crowds of 25,000 to 100,000 people but disappointing to realize that you already know more than most of them do, and that vendors have their booths staffed to sell to the end user crowd, not provide you the in-depth information you came for. In many ways after you see the hundredth web browser gadget, you feel these shows have teased you and left you hanging. The truth is, they were never really meant for you. They are essentially feel-good parties where various people posing as "experts" explain how golly great the Internet is.

HARD INFORMATION — STRAIGHT ANSWERS — REAL PEOPLE

But for four years there has been ONE show that does things a bit differently. In fact, it was built specifically to address the very problems you now face

and provide the solutions — by people who faced them and had to learn the hard way. It provides the most intense personal networking and educational environment around, with operators and vendors teaching each other how their products and services can best be used. And the results have been nothing short of phenomenal.

Attendees and vendors to the past four Online Networking Exposition shows have a higher percentage of success stories per person than any other demographic group you can locate in the online or Internet world. Period. And the greater part of this success came from a kind of "stone soup" approach to predicting the future. By gathering the real doers and builders online to compare notes, this show has more reliably both influenced and predicted what would and what would not be important in coming years than any other event. How far ahead of its time would you find clues on what would happen at this show? Let's look at some examples:

In August 1992, while the focus of the show was the BBS, the show had 10 hours of seminar sessions devoted to the Internet, including what it was, how it worked, and how to use it effectively. Internet demonstrations were given as well. Online graphics solutions were discussed heavily and the RIP protocol was born at this show, with vendors signing on to support it before the show was over.

By August 1993, Dr. Vinton Cerf (widely known today as the father of the Internet) was at this show, talking about how the Internet would soon "take over" as the primary communications channel. He expressed his surprise that the attendees seemed so "tuned in" to the Internet already and were not only receptive to his thoughts but were actively working in post-ses-

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sion conversations to extend his ideas and take them to deployment. Most of the world was skeptical at this time that the Internet would be the way this would all go, but if anything Dr. Cerf understated the impact of what has happened since and the attendees of this show were on board.

Also at the 1993 show Internet was on display in vendor booths (two large ISPs had booths at this show), while in the classrooms practical demonstrations not only discussed how you hooked up Internet to your online service but showed detailed installation steps and products — not just theory. This was the first place you could go to learn how to be an Internet Service Provider. Internet sessions now accounted for over 20 hours of seminars.

ISDN appeared at the show in 1993 too, with 5 hours of seminars indicating how this technology might be the next step for general distribution bandwidth (the first national demonstration of compatible ISDN wouldn't occur until several months later). On the modem front, the first 28.8kbps modem in the world was shown at this show, and orders were taken for delivery of the first units. Most of the rest of the world was just realizing that 14.4kbps modems really worked, and maybe they should try them out. The blockbuster announcement was that sysops could have 28.8k modems for \$299 assuring that these high speed modems would become low priced much faster than any advanced modem ever had before.

With seminars on satellite communications, data compression techniques, X.25 networks, online graphics technology, and online database technology the 1993 show gave a good view of the present and future state of most online technologies.

By August 1994 the gloves were off at this show and Internet was everywhere. Every classroom was wired and the vendor floor had full high speed Internet access to any booth with products to use it (and several vendors showed up with Internet products ready to roll out). Internet publishing now had several sessions devoted to it and Mosaic won the Dvorak award for excellence (nearly a year before most people even knew what the World Wide Web was).

HTML authoring sessions, combined with over 6 hours of sessions on how to deal with money online (including Dr. David Chaum introducing Digicash) clearly showed that transaction process-

ing and Web authoring were destined to be important subjects in the years ahead.

The total Internet class time had now risen to over 35 hours and along with detailed information and tutorials on how to put together what it took to be an Internet Service Provider, several unique devices were rolled out.

Ascend was showing their Pipeline ISDN adapter/router to the budding Internet Service Provider crowd at this show, the IPAD was shown by eSoft, and there were sessions on how to use the Internet communications in Chicago (later to become Windows 95) from Microsoft.

*"The 5th annual show
has been renamed to
"Online Networking
Exposition and Internet
Service Provider
Convention" or
ONE ISPCON."*

In August 1995 this show had Windows 95 on terminals for user hands-on more than a week before it was officially released. Internet now dominated the seminars with over 80 hours of sessions on Internet technical issues. In addition there were sessions on how to program CGIs for web servers, and over 15 hours of seminars on HTML including a session by Dr. Charles Goldfarb the inventor of GML and later SGML from which HTML is derived.

By the 1995 show Windows NT was being seen as a server to be watched for Internet applications, with several products being shown for it. Also, several products were introduced to extend the World Wide Web and go beyond its limitations. Products which brought BBS-like message and file area capabilities to the Web, Mindwire (a unique Internet client/server applications platform), and several other products clearly indicated that the web needed more capability than it could provide, and that ways to extend it would be the focus of the next year.

Sessions such as "The Joy of Sysoping" had transformed into "The Joy of Webmastering" and "How to be a successful ISP" by 1995, and the pioneers of the online world showed that they were staying at the front of the technology as it moved. Most ISPs had been (or still were) BBS sysops.

All of this background brings us to 1996. When the Online Networking Exposition began in 1992, online providers consisted of commercial services and BBS sysops and the name "ONE BBSCON" reflected that. With the clear change in focus to the Internet, the 5th annual show has been renamed to "Online Networking Exposition and Internet Service Provider Convention" or ONE ISPCON. It will be August 8-10 at the Moscone Center in San Francisco, California, and there are generous early registration discounts if you act fast. Call (303)693-5253 to register or visit the show's web site at <http://www.ispcon.com>.

San Francisco is the heart of Internet Service Provider territory in the United States (nearly 30% of all U.S. ISPs are in California), so you can safely expect the 5th annual ONE ISPCON to continue the tradition of being the place where you can learn the most about how to build servers, connect to the Internet with leased lines, and whatever else has happened by August that is pointing the way to the future of the online world.

The Internet continues to prove that there is such a huge world online that no one will dominate it. There is more opportunity than ever for success stories if you just learn the technology and build personal networks with those who use it regularly so you can learn from each other's experiences.

Many of you who are new to the Internet have looked for a show that would offer this, but been disappointed in what you have found. Your answer will be the 5th annual ONE ISPCON and you should make your plans now. There has never been anything like this show, and no trade show has built winners as well - both attendees and vendors. Companies have been born from exhibiting at this show, and many attendees have come wondering how to do one thing and left knowing how to do that and ten other winning projects. It is one of the most intense learning and personal networking experiences you will ever have.

So just when a show like this is essential to your success, you have an opportunity to attend the show that has spent the past four years tuning itself to deliver the exact mix of personal networking, educational seminars, and hands-on product exposure you will need to win in the next 18 months. The 5th annual ONE ISPCON. Miss it at your peril! ♦



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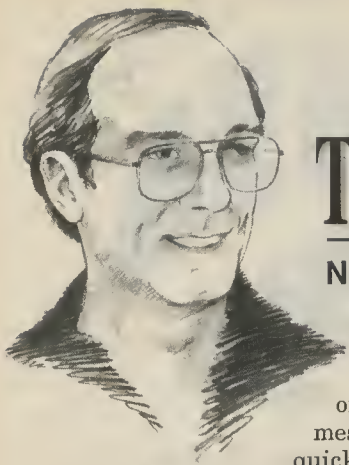
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THE COMPLEAT INTERNAUT by David Hakala

Navigating Newsgroups

David Hakala first appeared in *Boardwatch* in February, 1989. From May of 1991 until he assumed the position of Editor at Fault at *BW* in April, 1995, David wrote for a number of trade and mainstream journals, co-authored the book *Hot Links* with Mark Eppley, CEO of Traveling Software, and penned his own book, *Modems Made Easy*, which entered its second edition in March, 1995. In his spare time, David enjoys science fiction, billiards, country-western music and catching crayfish with his son, Tony Eric. David can be reached at mailto:david.hakala@boardwatch.com or at (303)973-6038.

Newsgroups are public message conferences carried by millions of Internet host sites around the world. A message entered in a newsgroup at one site is quickly duplicated on all the other sites that carry that newsgroup. Users at each site can then read and reply to messages, as well as post their own. (If this reminds you BBSers of FidoNet and other BBS-based echomail conferencing systems, give yourself a cookie.) "Group" alludes to the fact that messages are related to each other by a general topic - the newsgroup's name, i. e. **comp.bbs.wildcat**. "News" is an optimistic hope that most messages will be informative and concise.

Newsgroups are the Pandora's Box of the Internet. Guardians of Public Morality, repressive governments and other anal-retentive types see newsgroups as the source of pornography, paedophilia, sexism, racism, anti-Semitism, stock scams, sedition and POIs (Plain Old Idiots). Libertarians and other loose cannons staunchly maintain that newsgroups are our brightest hope for a free and open society, an egalitarian forum in which Everyman (who can access newsgroups) can speak his mind, keep the Establishment on its toes and expand his horizons. Both camps are right. With millions of people posting whatever they please, newsgroups inevitably contain good and bad.

Let's see how newsgroups work and how to use them.

NEWSGROUP NAMING CONVENTIONS

Newsgroups are organized using a naming system similar to the directory tree structure on one's hard disk. This hierarchy system allows a site administrator to easily order groups of newsgroups without specifying the full name of each one, i.e., he can take the entire **comp.bbs.*** collection of newsgroups and leave the rest. Some of the top-level hierarchies include

comp	- computer science, e. g., comp.bbs.wildcat.doors
misc	- miscellaneous, e. g., misc.computers.forsale
news	- Internet news, e. g. news.announce.newgroups
rec	- recreation, e. g. rec.games.video.marketplace
soc	- social topics, e. g., soc.culture.albania
talk	- chitchat, e. g., talk.rumors
alt	- alternative, e. g. alt.dinosaur.barney.die.die.die

Of the 15,000 or so newsgroups, over 2300 are in the **alt.*** hierarchy. It is the source of most of the uproar about "indecent" newsgroups. This is where you can find pornography, sedition, heresy and so on. You'll also find support groups for sufferers of various diseases, mental disabilities and social conditions, fan clubs for celebrities and hobbies, soapboxes for conspiracy theorists and evangelists. There is a reason most of the controversial newsgroups end up in the **alt.*** hierarchy - it was designed so that anyone could set up a newsgroup.

CREATING A NEWSGROUP

The "mainstream" hierarchies - **comp**, **misc**, **news**, **rec**, **soc**, **sci** and **talk** - have a formal set of procedures for adding a new group, involving proposals, discussions and votes. As an *alternative* to this structured process, the **alt.*** hierarchy requires no discussion, no justification of a new group and no vote to permit its creation.

Anyone can start an **alt.*** newsgroup. All you need to do is send a special "control" message to your newsgroup server. The syntax of such a message varies depending on the type of server you use (your system administrator can provide the syntax), but essentially you just post a message that tells your server to create a new newsgroup named **alt.some thing.whatever**. That message will also be sent to all other newsgroup servers on the Net. Unless the administrator at some site actively decides to screen every control message that comes in, your newsgroup will automatically be created.

Yes, it really is that simple. Most system administrators don't bother screening requests for new newsgroups; they have other things to do. However, some admins will refuse to create a new newsgroup on their servers for various reasons, most of which amount to "too much trouble." You can learn how to avoid causing them trouble - and thereby achieve the widest distribution for your newsgroup - by following some good advice laid down by David Barr of the Penn State University. To receive it, send mailto:mail-server@rtfm.mit.edu with the message **send usenet/alt.config/So_You_Want_to_Create_an_Alt_Newsgroup** in its body or visit <http://www.math.psu.edu/barr/alt-creation-guide.html>.

READING NEWSGROUPS

Most of us are content to just read the "news" and occasionally kick in our two cents worth. You need a newsgroup reader program - often abbreviated

as newsreader – to do so. Shell account users will generally use UNIX programs such as **tn**, **rn** or **pine**. MS-DOS users might try Trumpet Newsreader for DOS, available at <ftp://b-box.trumpet.com.au/dostrump/> and many large ftp sites. BBSs often carry newsgroups, and they work just like other mail conferences on BBSs. But we're going the mouse-potato route, with a Winsock-compliant newsreader.

My workhorse newsreader is **WinVN**, a freeware program for all versions of Windows. Originally written by Mark Riordan, WinVN has been reworked by many people, particularly Sam Rushing, Jim Dumoulin and John S. Cooper. Version 0.99 is available at ftp://ftp.cdrom.com/pub/cica/win95/netutil/winvn_99.zip and at many other public archive sites.

CONFIGURING WINVN

After unpacking WinVN into its own directory, run the **winvn.exe** program and select Config from the main menu. Choose Communications from the sub-menu to pull up the window shown in Figure 1.

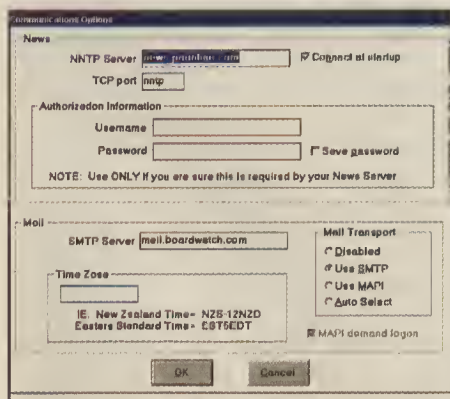


Figure 1: Configuring WinVN Communications

Enter the name of the newsgroup server from which you will get your news in the box labeled NNTP Server. (Get the server name from your LAN administrator or ISP.) The default TCP port is usually nntp; if it's something else, your LAN administrator or ISP should tell you. If the server requires your username and password, enter them in the appropriate boxes.

Check the Connect at Startup box unless you want to click the Connect button every time you load WinVN. The program works with either a LAN IP connection or a SLIP/PPP dialup account.

WinVN can also send e-mail to an SMTP (Simple Mail Transport Protocol) server, allowing you to reply privately to a specific individual whose messages you may read in a public newsgroup, without having to switch to your e-mail program. But WinVN does not receive incoming e-mail, just newsgroups, so you do not need to enter your POP3 username and password anywhere. Close this window when you are finished.

Select Network from the main menu and click on Connect to Server. Once you're connected to the NNTP server, a prompt will appear asking if you want to download the entire current list of available newsgroups. You need to do so at least once, to get a list of groups from which to choose. Often the list is several hundred kilobytes long, so downloading it at 28.8 Kbps or slower is not something to be done on every trip to the news server. You may want to download the whole list every few weeks just too see what new groups have been added.

When you download the entire list, a new window like the one in Figure 2 appears. Here you can browse the top-level hierarchies one at a time, peruse the newsgroups in each and select the ones to which you wish to "subscribe." Under the Config|Group List menu option, you can choose whether WinVN should list only the groups to which you have subscribed or all of the available newsgroups.

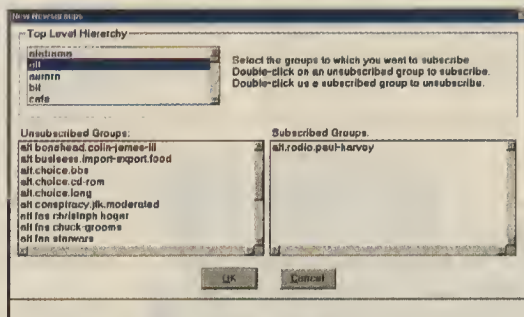


Figure 2: Subscribing to Selected Newsgrups

After subscribing to some newsgroups, double-click on any one of them to download the headers of the messages in the group. There may be several thousand messages in a group, so WinVN prompts you to specify how many headers you want to download: 100, 250, 500 or all headers of unread messages. One hundred headers at 28.8 Kbps is worth waiting for; otherwise, start the download process and go sort your laundry for a few minutes.

When the headers have all arrived, they will appear in a list that shows details such as date, author's e-mail address, subject and so on. You can sort the list by subject, date/time, author, article number, number of lines each message contains or just leave them in natural thread order (original message followed by replies). You can also search for text strings embedded in headers, to help you find messages you might want to read.

Just double-click on a header to download the body of a message and read it. While reading a message, you have the options to save it, respond to it in a public newsgroup reply or respond via e-mail to the author, or forward the message to another e-mail address. Optionally, you can highlight several headers, click on the Articles item in the article list window, and save all the messages to a text file. That way, you can read them offline, saving a few minutes of connect time if you are on a SLIP/PPP link.

DECODING BINARY FILES

Newsgroup messages, like e-mail, can contain only 7-bit ASCII characters. Still, it is possible to send and retrieve 8-bit binary files such as spreadsheets, word processor documents and yes, those nasty old image files. It's a matter of encoding a binary file so that each 8-bit character is represented by two 7-bit characters, transmitting the resulting text file, and decoding it at the receiving end. WinVN can decode MIME and UUENCODED binary files; it does not encode files.

Usually, a message header will contain some indication that the body of the message is encoded. References to JPG or GIF images are common examples. Often an encoded file is too large to pass in one message, so it is broken into several messages which are labeled sequentially, i. e., "(01/02)" may appear in a message header. When you see such a multipart message, sort your header list by subject so that all of the parts will be listed in order. Select all of the related messages, then choose Decode Selected Articles from the Articles menu. WinVN will download the selected messages, decode them, assemble multipart messages into a single file and save it at a location of your choice. ♦



CONSUMMATE WINSOCK APPS by Forrest Stroud


The applications reviewed here and many more are available on Stroud's Consummate Winsock Apps List, <http://cwsapps.texas.net> and <http://cws.wilmington.net>.

Forrest H. Stroud is a senior at The University of Texas at Austin. He is currently pursuing a degree and career in Information Systems and Data Communications Management. Stroud can be reached at <mailto:Neuroses@mail.utexas.edu>.

One way or another the Net as a whole will thrive and prosper, whether the economic burden is shouldered by political, commercial, or individual factions. The critical question is whether the information will continue to be readily accessible for all and whether the information can retain its integrity without selling itself out to the propaganda so frequently encountered with advertising on the Net, while driving the cost per user down and ensuring that information is accessible to all, would only serve to atrophy the purity of information as a whole; however, the reverse is actually more likely to occur.

This is true for several reasons, but most importantly, biased propaganda typically has the paradoxical effect of pushing the latent truth out into the open rather than burying it in an avalanche of half-truths. For example, entire anti-advertising industries have been spawned in the wake of the explosion of mass advertising, including publications whose sole purpose is to review products or services, persons whose income is derived from revealing the "potholes" hidden behind misleading advertisements and press releases, and firms whose goal is to filter all the propaganda and give insight to customers about the pros and cons of a decision to be (or not to be) made. As great as the need often is for distorting the truth in order to make a sale, the drive to reveal that all is not quite as it seems becomes just as strong. The result is a symbiotic balance which is beneficial for all.

WEBIMAGE



Desc:	GraphX Viewer on steroids — the commercial version
Pros:	Web Effects, solid selection of features, image mapping, a graphics app with webulites in mind
Cons:	Lacks ACDSee's speed and several of Paint Shop Pro's featuresits complexity may be daunting for new users
Location:	http://www.group42.com/webimage
Filename:	16-bit - w16d.zip. 32-bit - w32d.zip
Status:	Commercialware - \$39.95. Free evaluation demo
Company:	Group42

WebImage is Group 42's commercial release of the popular GraphX Viewer client. WebImage builds on GraphX Viewer's features and ease of use and also

adds many excellent new features. WebImage nearly rivals Map This! when it comes to developing quality image maps. WebImage, however, offers much more than just image mapping; additional features include image optimization (automatic detection of an image's color content for saving the image in variable bit depths in order to reduce the graphic's file size), interlaced GIF and PNG images, one-click simplicity in creating a transparent GIF, a smart decoder for automatic encoding and decoding of files (single or multi-part files and in UU or XX encoding formats), printing capabilities, and the same excellent thumbnail catalog management system as found in GraphX Viewer. WebImage is also available in both Windows 3.x and Windows 95/NT versions.

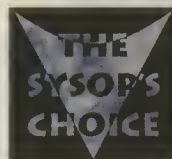
WebImage is designed to be the graphics tool of choice for Net and (specifically) web users. It does this in part by bringing together the impressive features listed above and also in part due to "Web Effects" — additional features specifically designed for webulites. Web Effects allow for easy creation of basic images from scratch, button stamping of images, adding of borders to your images, text additions, and embossed tiled backgrounds for yet another interesting and quite unusual look. Additional image enhancements for graphics include rotation, resize, mirror, brightness, color contrast, gamma, remove noise, and invert. Graphics file types supported include BMP, Fax G3/G4, GIF, JPEG, PCX, PNG, SunRaster, TARGA, TIFF, and XWD. WebImage isn't limited to Internet users; graphics users of all types will likely find WebImage to be a critical application. And for the many web graphics users out there, due notice is served — your tool of trade has arrived.

WEBTRENDS

While WebTrends is the most expensive web statistics client currently available on the Net, it is also the most powerful, offering at least three times as many features as the competition. If you can think of it, WebTrends can do it. However, as with Statbot, you will need access rights to the server's web stats logs (access log, referer log, error log, browser log, etc.) in order to make use of WebTrends. One of WebTrend's coolest features is the ability to view and/or compile stats reports locally or remotely. Thanks to these capabilities, Windows 3.x, 95, and NT users can have WebTrends automatically fetch a log file from a UNIX server and complete the report generation process on a local platform. This unprecedented feature will be a godsend for webmasters with remote-hosted web sites. Users can also specify whether to view or compile a report for the entire log or specific portions of it (first hour, last hour, specific



Development Hardware & Software



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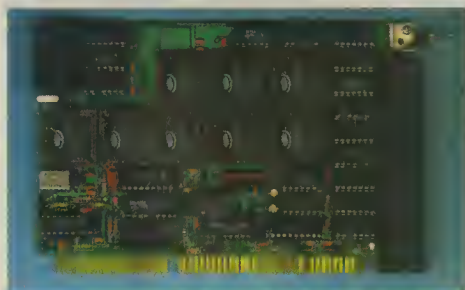
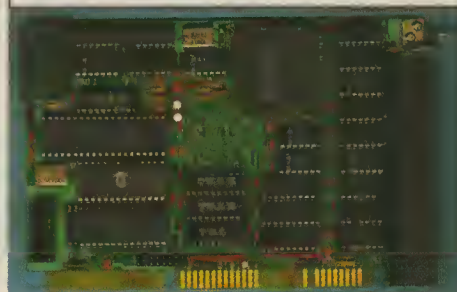
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WEBTRENDS	
Desc:	Extremely powerful client that takes web statistics services to the next level
Pros:	Excellent stats program, graphical charts, remote and local report management, flexibility
Cons:	Expensive, lacks an internal database, multiple log files cannot be reviewed concurrently
Location:	http://www.egsoftware.com
Filename:	wt_trial.exe
Status:	Commercialware - \$299. Free 14-day evaluation
Company:	e.g. Software, Inc.

date, etc.). WebTrends then automatically launches the web browser of your choice with the new reports. WebTrends complements these services with a solid array of added benefits, including filtering capabilities, automatic scheduling for reports, extensive report templates, and options for creating your own reports.

The real power in WebTrends comes from an amazing abundance of report capabilities. WebTrends offers graphical and tabular reports for every demographic and geographical parameter that could possibly be derived from a web server's logs, including level of domestic activity by hour and day, which services or pages are most popular, what sites people have come from to get to your site, the errors people are encountering with your site, the nationality (city, state, province, or country) of the users accessing the site, and much, much more. One limitation of WebTrends is that sites with multiple log files cannot be reviewed concurrently. Another feature missing in WebTrends is the use of a compact, local database (as found in Statbot) for eliminating the need to load the full web server log each time a new report is scheduled to be generated. Finally, WebTrends users could greatly benefit from an improved online help system — the current bare-bones documentation will likely not suffice for any but the most experienced web statistician. Despite these three failings and an intimidating price tag, WebTrends remains one of the best solutions for all of your web stats needs.

For a sample WebTrends report, check out The CWSApps List WebTrends Page at <http://cwsapps.texas.net/WebTrends/exectv.html>

KENN NESBITT'S WEBEDIT V4.0

The latest release of WebEdit has arrived with several well-appreciated new features and improved support for many of the old features, including additional proposed HTML 3.0 tags (math functions, icon entities, tables, and full support for the latest tags from Netscape 2.0 and Internet Explorer 2.0), a Home Page Wizard (which may well rival even WebWizard for ease of use), server side include tags, improved web browser support, and much more. Additionally, WebEdit now includes a URL Builder for easy selection of URLs, a Table Builder for rapid creation of advanced tables, a built-in WYSIWYG previewer for viewing HTML pages from within the editor (the previewer does not yet accept HTML 3.0 tags, though), and a new WYSIWYG image mapping utility for quickly developing high-quality image maps. WebEdit also

saves every URL you enter, letting you choose from a list rather than having to retype the same URLs over and over. Also included are a tool for removing HTML tags from a document and a tool for quickly producing a template of tags commonly used in HTML documents. WebEdit also features MDI — multiple-document interface — which allows you to work on up to ten different HTML documents simultaneously.

As in most other HTML editors, there is an option for calling your favorite web browser to view the current page. Additional features include word wrap, time/date stamping, search and replace, and almost every HTML command imaginable. WebEdit even allows you to create user-defined tags. Many of WebEdit's features are now found in less expensive HTML Editors like HTML Easy Pro and HotDog. WebEdit does have some very interesting new features, like floating customizable toolbars, the Table Builder, and a multilingual spelling checker (American English, British,



KENN NESBITT'S WEBEDIT

Desc:	Crippleware evaluation release of a feature-rich superb HTML Editor
Pros:	Great collection of features, includes proposed HTML tags and user-defined tags
Cons:	Relatively expensive, not as easy to use as HotDog
Location:	ftp://ftp.thegroup.net/WebEdit/beta/
Filename:	we?????.zip
Status:	Shareware - \$79.95 (commercial use) or \$39.95 (non-profit use)
Company:	Kenn Nesbitt of Knowledge Works, Inc.

Dutch, French, German, Italian, and Spanish); unfortunately, all of these features are crippled in the evaluation package, so users will likely have a difficult time determining whether WebEdit is worth the list price. While sporting more features than HTML Writer, WebEdit does have one drawback that keeps it from taking the crown — at just under \$80 (but only \$40 for non-commercial use), WebEdit can't match HTML Writer's donation-ware status or HotDog's inexpensive price coupled with superior overall ease of use and extensive set of features. Still, with each new release WebEdit takes a giant leap forward in narrowing the gap and may well reach and surpass HotDog in the near future.

QUOTE TICKER BAR FOR WINDOWS 95

This a great little app that creates an app bar (similar to the Windows 95 task bar) on your screen for displaying the latest information on your favorite stocks. In addition to working on Windows 95 machines, Quote Ticker Bar (QTB) also functions on Windows NT and Windows 3.x platforms (Windows 3.x users will need Win32s in order to run QTB). You will get a good idea of Quote Ticker Bar's abilities from the evaluation release, but overall it is quite limited in terms of features. For only \$20 you can get the full product with many additional features. The evaluation release is limited to two default stocks (Microsoft and Netscape), one display speed (if you have a fast computer the stocks go by so fast you may not even be able to read them), and two stock servers (if both are busy you're out of luck). Registering the product takes care of these shortcomings by offering unlimited stocks for display, a property menu for changing the default preferences (including the display speed and default stock servers), and three



Seem familiar?

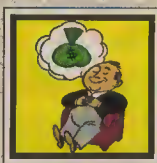


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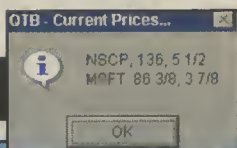
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QUOTE TICKER BAR FOR WINDOWS 95



Desc: Free (time-delayed) stock quotes delivered straight to your desktop

Pros: Easy and efficient app for delivering free stock quotes straight to your desktop

Cons: Stocks are always delayed by at least fifteen minutes, evaluation release has limited features

Location: <http://www.pcnet.com/~randys/>

Filename: qtb.zip

Status: Shareware - \$20

Author: Randy Santossio

CYBERPHONE FOR WINDOWS 3.X AND 95

CyberPhone
The Internet Telephone

Desc: The latest Internet phone application

Pros: Full duplex, call muting and blocking, extensive stats, and sound effects

Cons: Lacks some of the features found in the competitors, online help system could be augmented

Location: <ftp://magenta.com/pub/cyberphone/>

Filename: cp????.exe

Status: Free beta evaluation

Author: CyberScience, Inc.

additional default stock servers. There is also a display-all command on the app bar for providing a listing of all your stock prices on the screen at the same time. In both versions, and with most any free stock service, the stock rates listed are always delayed by at least fifteen minutes. While Quote Ticker Bar might not be as informative as the SECAPL Quote Server (<http://www.secapl.com/cgi-bin/qs>), it is an efficient and valuable reference for anyone with more than a passing interest in the stock market. After all, what could be easier than having free stock quotes delivered straight to your desktop?

CYBERPHONE FOR WINDOWS 3.X AND 95

The latest in the Internet phone craze to hit the web is an app by the name of CyberPhone. Like its predecessors (Internet Phone, Digiphone, WebPhone, Speak Freely, and WebTalk), CyberPhone allows users to make long-distance phone calls over the Net for as low as the cost of a Net connection. CyberPhone supports both half-duplex and full-duplex transmissions, 8-bit audio, Caller ID, and CyberPhone servers (for easily finding others to talk with). Like Speak Freely,

CyberPhone offers cross-platform compatibility, with separate versions available for Windows 3.x and 95, Sun Solaris, Linux, SunOS, and more to come. While its interface might not be as attractive as that of WebPhone, CyberPhone sports a generally appealing layout complete with advertising space for companies wishing to sponsor the CyberPhone development team, CyberScience, Inc.

CyberPhone also currently lacks many features found in competitors' releases, including the ability to handle simultaneous conversations, voice mail/answering machine capabilities, message encoding, and advance message compression. Still, its feature-set is quite impressive, including essentials such as call muting and blocking, an efficient address management book, extensive communication statistics for conversations, point to point manual calling, sound effects and voice smoothing, and sufficient online help documentation to get users started. Overall, CyberPhone fares well in what is rapidly turning into a very competitive segment of the Net. For anyone looking for ways to save on long-distance phone calls, CyberPhone definitely delivers. ♦

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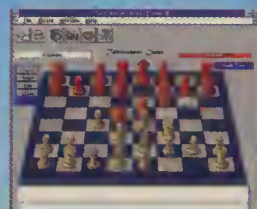
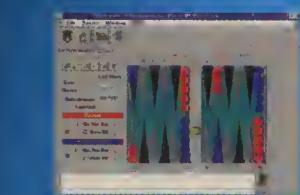
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CYBERWORLD MONITOR Frank X. Sowa

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Frank X. Sowa is president of The Xavier Group, an international consultancy providing strategic planning, forecasting, training, and development of business and communications systems for organizations since 1981. As a certified software consultant for Softarc's First Class, and a reseller for other companies, he configures customized BBS systems for organizations, complete with "regular content updates." Sowa is also founder and sysop of SEED.NET (412) 487-5449, "the online incubator" for small businesses, a seamless BBS-to-Internet (PPP) provider, with business start-up assistance and seed capital available online. **mailto:franksowa@seednet.com**

Just a few months ago, Newt Gingrich and many House members were calling for the total elimination of the Department of Commerce and the Federal Communications Commission (FCC). But six months later, these agencies have survived the attacks by Republican House freshmen, and with the help of Republican insiders they are becoming the potential "enforcers" of the new Telecommunications Act.

VICE PRESIDENT UPSTAGES CONGRESS

The bill would have passed in 1995, but much to the Republicans' dismay, Vice President Al Gore stole political high ground in the arguments by pre-empting the vote, saying how much the White House was in favor of the bill. The Republicans, not wanting to give the White House any thunder in an election year, decided to put off Congressional vote on the final version of the bill until this Spring.

Since then, the two sides have been using the stalled passage of the bill to cut some sweetheart deals for major contributors in the upcoming presidential election. Republican insiders suggest that the bill may be delayed further — perhaps through the November election — to "keep contributors in line."

As it stands now, the bill has so many "favors" added to it for political purposes, that even if it does go to vote and pass, it is likely to be vetoed by the White House as terrible legislation — which would upset many of Clinton's largest contributors from the last election. In fact, this is probably what the Republicans had been hoping for all along — and why Gore's announcement of support for the Act led to their delaying its passage.

THE "INDECENT" CRUSADE TO CENSOR CYBERSPACE

But, that won't stop the crusade to "censor" the online world. Word from Congressional Republicans is that they are already preparing a 1997 version of the bill — just in case it gets defeated. Insiders claim "there is a debt owed by the Republicans to the Christian Coalition led by Ralph Reed." In the "Republican Revolution," Reed and his leader, Pat Robertson, controlled the swing vote that carried so many winning

Republican freshmen into office. That swing vote is seen as the key required by any Republican presidential candidate to lock up the primary this summer and be nominated to run against Bill Clinton. It is also seen as the balancing force against the strength of the Democratic union support. Every potential Republican candidate is aggressively chasing the support of Reed and his coalition. And, no incumbent Republican wants to incur the wrath of the Christian Coalition by upsetting the kingmaker Reed.

It was Reed who authored the set of very restrictive regulations to regulate and censor the Internet through the FCC. Remember the FCC's "seven dirty words" regulations on broadcasters? Now, these are possibly going to also be used as part of the virtual morality standards, giving the FCC clearer guidelines on how to censor violators on the Net. And, it was Reed who originally provided Sen. Jim Exon with financial support to push the Exon Amendment, formally known as the "Communications Decency Act of 1995."

CHALLENGING THE NEW WORLD ORDER

But as far as Reed, Robertson and the Christian Coalition are concerned, Exon's amendment never went far enough. The amendment, for example, left certain protections in place for online system operators, content providers, and forum moderators that would have exempted them from liability for content in conferences, chat forums or e-mail. The Christian Coalition, on the other hand, wants sysops to be held criminally responsible for all content — and to be severely punished if anything posted does not meet their

"predetermined morality standards" which they'd like to enforce on everyone from the federal or even global level. (These are the people who brought you the best-seller, *The New World Order*.)

If this sounds more like the rumblings that began Hitler's rise to power rather than something "Christian," you are probably right. Make no mistake about it. This is not a movement to restore the sanctity of religion to society. This is a power grab — a coup d'etat, and what is most frightening about it is the number of politicians who have been silenced by the power and the money of the group.

As Sen. Exon moves on to retirement in 1996, the coalition has moved its support to Rep. Henry Hyde (R-IL). Hyde has become the Christian Coalition's mouthpiece in the House to ensure that the final version of the Telecommunications Act places severe restrictions and content controls on all sysops, placing

*"This is not a movement
to restore the sanctity of
religion to society.
This is a power grab —
a coup d'etat."*

the enforcement of such restrictions under the control of the FCC — and placing the planning of the controls under Congress and the Department of Commerce. The TCA also includes a \$100,000 maximum fine and a jail sentence of up to two years (more severe than what a playground drug pusher would have to face) for carrying online any information that “can be considered indecent.” According to Hyde, this would include any discussions about abortions, for example. Reed, meanwhile, has sworn “not to rest until cyberspace is totally cleaned up, and made safe for children!”

APOCALYPSE BRINGS REED TO POWER

The Christian Coalition has an apocalyptic zeal to the enforcement of their subjective morality. They’ve even stated a timeline for having results in place before the beginning of the new millennium. To many in the Coalition, the fear of globalization and the “New World Order” under the controls of the “faithless” and inhuman multinational behemoths drives their angst. They see the Internet and the online community in general as a “driving force” to tear Christians and families away from traditional Industrial Age values.

Over the past decade, Pat Robertson has been their spiritual leader and religious guide. In the Reagan years, Robertson focused Christians on their need to become involved in politics — especially at the grassroots level. But Robertson has always proven to be a weak political force. That is, until Reed surfaced as a propaganda component of Robertson’s presidential bid.

Reed, like other propagandists before him, saw the potential fervor of the Christian group and worked his way into becoming their true political leader. In no time, Reed sopped up the power of the Christian Right, becoming a spokesperson of sorts, and working to control the fortunes of political wannabees. In the last election, he proved himself a kingmaker. Now, the dream of total control over the laws that regulate the online world are but a few votes away for Reed. Even if the courts find portions of the Act unconstitutional, he will have succeeded in getting the enforcement of regulations regarding computer-based electronic online services under the direct control of the FCC.

DOLE AND REPUBLICAN CANDIDATES BUY IN

Leading the charge to enforce Christian Coalition policies in cyberspace are just about every Republican presidential candidate — including Bob Dole. Which means that if a Republican becomes president in the upcoming election, it is very likely the policies of the coalition will become national law. Clinton vehemently opposes such policies. Instead, he has equally harsh policies of his own based on his belief that cyberspace poses a national security threat, and a threat to the “have-nots” of our society.

In the Congressional debates over the Telecommunications Act, Gingrich selected his own people to lead committee discussions on the adoption of the final bill. While Gingrich has worked to provide an image that he is “a friend” to the online community, it was his hand-

“After all “adult” pictures are pulled, where does [censorship] stop?”

selected people who eventually overturned the C o x - W y d e n Amendment — which would have provided complete indemnification of system operators — and instead went with the Hyde Amendment wording that was even tougher on sysops than the Exon Amendment. Could it be that Gingrich is not being 100% truthful with the online community?

WITHOUT FEDERAL TELECOMMUNICATIONS ACT, SYSOPS ARE VULNERABLE

The alternative to passage of the Telecommunications Act is equally devastating to the online community. Without a federal policy, our legal well-being is tied to a patchwork of state, local and international laws that often contradict one another, but yet are seen by the courts as applicable to the entire online community — since access to the online world is borderless and global. It places all who use and operate in cyberspace in total jeopardy. It makes us all criminally responsible for all content — everywhere.

Criminal investigations by agencies like the FBI (or the German police who “visited” CompuServe) can totally shut down legitimate operations until all content has been “checked over.” It appears that the lowest common denominator in censorship of the Net may prevail regardless of whether or not the new laws pass. Conformance to all notions of moral and

political correctness may be the only way to stay out of trouble in 1996 and beyond — which means Exec-PC’s decision to pull all “adult” materials may be the smart thing for everyone to do.

But after all “adult” pictures are pulled, where does it stop? Calvin Klein ads are considered repugnant and child pornography by some “standards” setters — yet the models appear “clothed.” Reed feels discussions of abortions are immoral and indecent. The Chinese find democratic discussions of their society “indecent.” The threat runs deeper than just the issue of child pornography.

SYSOPS THREATENED BY FREE SPEECH AND PRIVACY

For those who read this and think of Constitutional Rights to Privacy and First Amendment Freedoms of Speech — remember that there are many in the courts who feel that the Constitution does not relate to the global online community. However, even in cases where the judges and juries go out of their way to honor the Constitution, they seem to favor the end user over the system operator. Almost universally in court law, with the exception of clear criminal proceedings, the sysop has been held fully liable for everything that appears on his/her service — while the end user has been protected by privacy laws.

While all kinds of companies and individuals are making big plans to do business in cyberspace, the push by governments worldwide to tax, regulate and control such activities may severely slow the growth of the information economy and limit uncensored freedom and democratic expansion on the Net. Unfortunately, the drive to regulate cyberspace has grown to a fever pitch. The shakeout from this activity spells short-term trouble for sysops, Webmasters and Internet Service Providers no matter what happens.

To combat this trend towards censorship by the lowest common denominator of “decency,” the online community has but one avenue left at its disposal. It must educate the masses (only about 9.5 million people in the U.S. out of a population of 300 million are using the Net) so that the majority begin to understand the realities of the industry. We must change our public image, regulate ourselves, and market our services better. It is the only solution in a time when Democrats and Republicans and people from all walks of life feel threatened by this new media. ♦

WIN95 COMMUNICATIONS

by Steve Jenkins

ON-DEMAND DIAL-UP NETWORKING

Born and raised in Australia, Steve Jenkins moved to Portland, Oregon with his family in 1978. He is currently owner and Webmaster of [Windows95.com](http://www.windows95.com) at <http://www.windows95.com> which he administers from his two-bedroom apartment in Provo, Utah. Steve has a BA in French Literature, and is currently completing a Masters degree in Business Administration from the Marriott School of Management at Brigham Young University. He lives with his wife, Kay-Dawn, and his 15 year-old turtle, Sherman. Steve works as a consultant on Internet strategy to a number of firms, is an avid Netsurfer, and is one of the founder channel operators of *IRC #Win95-net*. When not sitting in front of his computer being yelled at by his wife to "shut that darned machine off," he enjoys skiing, piano, karate, teaching, writing, and wishing his wife would let him back on the computer. Steve's love of computers started in the early 80s, when he saved up enough money to buy a Commodore 64. He still argues that the C64 is one of the most powerful and user-friendly systems to date.

Since most of us Win95 dial-up users are refugees from Peter Tattam's 16-bit Trumpet Winsock stack, we got pretty accustomed to clicking on our Netscape icon, having Trumpet fire up automatically, log us in, then letting Netscape do its thing. This article will explain how to accomplish the same thing, but with Microsoft's built-in 32-bit Winsock stack.

Let me get the bad news over with quickly: the "vanilla" version of Windows 95 does not support automatic connection. You're going to need a bit of help from an add-on (but hey, what's new?). The bottom line is that Microsoft requires that you have the Microsoft Internet drivers installed, which are available in Microsoft Plus!, or are downloadable from Microsoft's Web site at <http://www.microsoft.com/windows/download/msie10.exe>. These drivers include the first version of Microsoft's Internet Explorer Web browser, Real Audio support, drivers for installing Internet e-mail support, an early version of the Dial-up Scripting Tool, and support for automatic dial-up. Download **MSIE10.EXE**, or run out and buy Plus!, then run the Internet Setup Wizard. In true Wizard style, dialog boxes will walk you through the initial dial-up Internet setup procedures.

Once the Microsoft Internet files are installed, you should see a blue Internet icon on the Desktop and in the Control Panel. If you double-click the Internet icon on the desktop, you'll start the Microsoft Web browser. You should either select the desktop icon, right-click the mouse and choose Properties, or just double-click the Internet icon in the Control Panel.

In the Internet Properties dialog box, the first tab is titled AutoDial.

Sounds like something we're looking for. Check the **Use AutoDial** box, then choose which dial-up connection you'd like to use by default. You can also change the properties of a dial-up profile or add a new one from this dialog. If you'd like Windows 95 to automatically disconnect you after a certain amount of idle time, check the **Auto disconnect** option, and choose when you'd like to be disconnected. You can also choose to **Perform system security check** before dialing, but if you're using any peer-to-peer networking, this will prompt you every time you make a connection and warn you if you've allowed any write access to any shared directories on your drive(s). Press the OK button and you're ready to go!

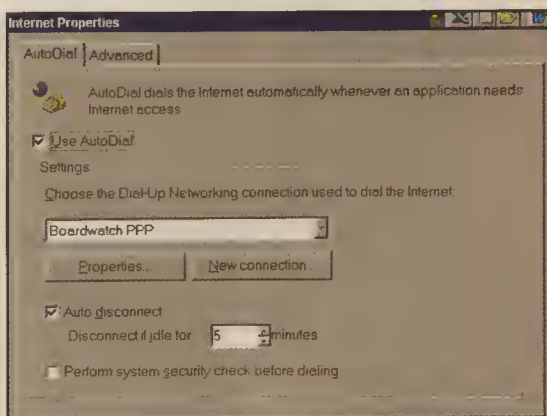
Now when you start any Winsock application, the dial-up networking **Connect To:** dialog box will pop up. Just press the Connect button and you're on your way! However, I would still wager that many of you are thinking, "WHAT?! I still have to press a button?!" Well, yes, but there are ways around that, as well. There are quite a few dial-up networking utilities that take care of small details like pressing the Connect button, as well as a few other nifty dial-up features you can't live without. My favorite dial-up utility happens to be a very well-thought shareware app called **RAS+95**.

Written by Roger Lamb of Lamb Software, RAS+95 is the most

complete of the dial-up utilities available for Windows 95. In addition to further automating your dial-up connection, RAS+95 can also track the time you spend online, re-establish broken connections, re-dial busy lines, dial multiple phone numbers and/or providers, keep tabs on your online bill, and, best of all, automatically launch applications when you connect and close them when you disconnect. You can download RAS+95 directly from the Lamb Software Web site at <http://www.lambsoftware.com>. As of this writing, RAS+95 was still in beta, but Roger Lamb has done A LOT of work on this program, making it more stable than most release software I've seen.

The RAS+95 setup program is pretty straightforward, and automatically detects any and all dial-up profiles you've set up. You can decide which one should be the default, and it will try to establish the connection when RAS+95 fires up. If you're a real automation freak, you can open the options dialog box and start listing the programs that you'd like to have RAS+95 launch once your connection is established. In the shareware version, you're limited to two auto-launching programs, but the meager **\$29.95** registration fee will let you auto-launch apps to your heart's content. You can even choose to have the default (and somewhat useless) Connected To box hidden from your desktop when you're online!

There is one additional feature of Windows 95 dial-up automation: scripting. Unless your provider offers a "vanilla" PPP connection, you may be forced to type in your username, password, and perhaps some other commands when you start your connection. You can check out Jack Rickard's scripting instructions in the December 1995 Issue of Boardwatch, or tune in next month when we'll take an in-depth look at some more complex Win95 dial-up scripting options. Until then, have fun being lazy! ♦





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LOW-INCOME APARTMENTS GET FREE INTERNET

Since July, 1995, residents of the Spring Isle apartment community in Beaver Dam, Wisconsin (pop. 15,000) have enjoyed free Internet access along with free cable TV, heat and water. Each of the 134 units comes with an unlimited access 28.8 Kbps PPP account. Residents get e-mail addresses and server space for their personal Web pages. Currently, only about 10 percent of residents actually use the service, but that percentage is rapidly rising as new tenants are attracted by the unique offer and the community's developer helps current residents acquire the equipment and skills they need to get online.

Pete Knaup developed Spring Isle and several other subsidized apartment properties in an effort to complement the town's efforts to revitalize an economy ravaged by the exodus of manufacturing employers. Beaver Dam focused on attracting high tech employers such as Quadgraphics, which produces many of the nation's largest magazines. Not surprisingly, such firms tend to attract young employees, often with young families, who need affordable housing.

Knaup has developed several such properties with financial assistance from the Department of Housing and Urban Development (HUD). But HUD rules severely limit the amenities Knaup is allowed to build into his properties. Swimming pools, community centers and outdoor recreation areas have been vetoed. Only about 30 percent of the units at Spring Isle are subsidized, but HUD's rules limit Knaup's ability to compete for market-rate ten-

ants with other communities on the basis of amenities.

Enter the younger Knaup, Clancy, who sat down at his first Kaypro computer when he was four years old. Clancy is one of those depressingly precocious guys who took to computers like a duck to water while the rest of us were still learning to format a floppy. He launched a programming and consulting business while in junior high school, installed his first Novell server at age 15 and of course, ran a BBS for his customers. Clancy's customers didn't use the BBS much (he closed it early in 1995), but they wanted Internet access so Clancy gave it to them.

Pete Knaup needed a competitive amenity, so Clancy provided it. Spring Isle now sports a T1 pipeline, and Clancy is busy scrounging up used PCs and other

equipment, refurbishing it and selling it to residents at bargain prices. He's also persuaded local video stores to stock Internet training tapes to help residents get started.

HUD officials have given the project a perplexed go-ahead, probably because they don't quite get it but it sure sounds compatible with their boss Clinton's "universal access" campaign to bring the Internet to "information have-nots."

The Knaups' ISP plans don't stop at the property line. They have just added capacity for 100 dialup lines and made arrangements with a small long-distance service company to provide Internet access to the entire state. ♦

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Notes From The Underground by Wallace Wang

ENCRYPTION IN PICTURES

Not many people encrypt their e-mail, which means that the small minority of users who do encrypt it immediately become targets for government snoops looking for suspicious activity. Since it's impossible to get everyone to encrypt their e-mail, do the next best thing and *disguise* your encrypted e-mail so it doesn't look like it's encrypted in the first place.

That's the idea behind *steganography*, which is an odd term derived from the Greek words "steganos" (covered or secret) and "graphy" (writing or drawing) to literally mean "covered writing." So steganography is the science of hiding information in an apparently harmless medium such as a picture or a sound file.

For example, suppose government agents decide to snare every e-mail message sent to and received from your BBS. With plain, unencrypted e-mail, spying computers could effortlessly search for key words such as "nuclear," "missile" or "bomb" and store copies of these messages for further analysis by humans. If you encrypt your e-mail, spying computers could just grab copies of any encrypted messages and crack them open at a later time.

However, if you send and receive pictures of antique cars, famous paintings, or bikini-clad models, you could pass your BBS off as an ordinary desktop publishing/clip art repository. Any government snoops examining your e-mail would find nothing but harmless messages requesting help converting PCX files into TIFF files or how to transfer graphics between a Macintosh and Windows 95 along with the usual collection of GIF, TIFF, PCX, or BMP files found on many BBSs.

Of course if you used steganography, certain graphic files could contain hidden messages such as secret newsletters you want to pass to others, messages that detail activities the government wants to suppress, or just ordinary text that you don't want others to read because you want to protect your privacy.

Now if someone steals your e-mail, they'll only see a pretty picture (or an obscene one, depending on your chosen graphic image). Unless a spy is certain that the picture contains hidden messages, he'll most likely ignore the image. To overwhelm a potential spy, simply send multiple graphic images periodically but only hide messages in some of them. That way a spy must examine every graphic image you send and search each one for any hidden messages.

To make a spy's task even more difficult, encrypt your text using a program such as PGP (Pretty Good

Privacy) and then store this encrypted text inside a graphic image. Now you've effectively doubled a spy's problems in deciphering your messages.

STEGANOGRAPHY SOFTWARE

To give you some real-life experience with steganography, DOS users can try a freeware program called *Hide and Seek*, which includes Borland C++ source code so you can examine how it actually works.

Hide and Seek can stuff any type of data (usually text or encrypted text) and hide it in a standard 256-color CompuServe GIF file. When stuffing data in a GIF file, the Hide and Seek program alters the GIF file, slightly degrading the resolution. Of course the more data you try to hide inside a GIF file, the more the graphic resolution will suffer.



Unaltered
GIF image



Steganographed
image loses
resolution

To prevent total degradation from occurring (and thus flagging that the GIF file may contain hidden information), you can use two techniques. First, use a black and white GIF file instead of a color GIF file. Slight degradation in a black and white GIF file isn't as noticeable as in a color GIF file. Second, store small files in the GIF file rather than cramming one huge file in a single GIF file. The larger the message that you try to hide, the more degradation will occur. To play it safe, store small files or break large files into several parts and store them in separate GIF files.

For a Windows-based steganography tool, grab a shareware program called *S-Tools* — available at <http://boardwatch.com> — which lets you hide messages in BMP or GIF graphic files, WAV audio files, or even in the unused spaces on floppy disks. When hiding data in the unused spaces on a floppy disk, the S-Tools program can create random rubbish among the unused sectors, thereby masking your message even more.

By hiding messages in the unused spaces of a floppy disk, you can safely (to a reasonable extent) exchange information with others in person. For more security, you could hide messages in the unused spaces and also in BMP and WAV files stored on that same disk. In that way, you could

Wallace Wang is the author of *CompuServe For Dummies*, *Procomm Plus for Dummies* and *Visual Basic for Dummies* (all published by IDG Books) as well as *Surfing The Microsoft Network*, published by Prentice-Hall. He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: 70334.3672 @compuserve.com or bothekeat@aol.com or bo_the_cat@msn.com

drive a spy crazy trying to keep track of possible ways you might be hiding your messages.

To toy around with other steganography programs and learn more about this relatively obscure branch of encryption, visit the *Steganography Info and Archive* web site at <http://indyunix.iupui.edu/~emilbran/stego.html>. If you're serious about encrypting your data and disguising that fact, browse through the steganography newsgroup at alt.steganography or get on the steganography mailing list at <http://www.thur.de/ulf/stegano/announce.html>.



So let everyone else use ordinary encryption (and broadcast to the world that they're doing it). But for additional security, take encryption one step further and embrace the strange new world of steganography instead. With steganography, you can put on a harmless front and pretend that you're doing nothing more serious than swapping pictures or sound files through your modem. But in reality, you could be trading atom bomb secrets, making clandestine plans to topple unfriendly governments, or just fantasizing that you're a CIA or KGB spy sending super secret information to your friends down the street who work at the bowling alley.

If you don't trust your government (Now why would anyone think that?) and want to protect your messages without calling attention to the fact that you're exercising your right to privacy, experiment with steganography. At the very least, you can always use steganography to convince your paranoid friends that there really is a government conspiracy hiding information only from them. ♦

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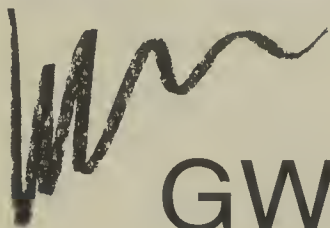
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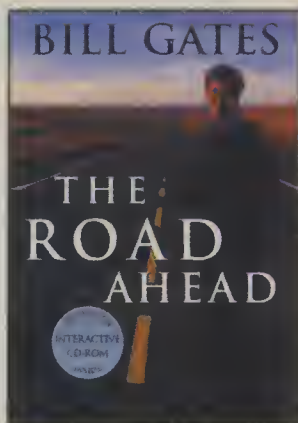
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BOOK BYTES by L. Detweiler

The Road Ahead

by Bill Gates
1995, Viking Penguin
286 pages, \$29.95
ISBN 0-670-77289-5
(212) 366-2000
Includes CD

The notorious Gates and his sprawling Microsoft kingdom are often criticized for lacking creativity and seizing the ideas of others; a common example is the Excel spreadsheet initially based on Lotus' product. The aphorism that "imitation is the sincerest form of flattery" is a lame reassurance to those who perceive their company's property or their jobs have been lost in the competitive realm of software and hardware development. Nevertheless, an unmistakable order emerges from this chaos, and the failure of companies can be attributed just as much to being out of tune with a marketplace that begins to behave almost as an intelligent, highly demanding entity with the final say, than to the crushing enmity of particular competitors. Many giants have been humbled by this reality (the obvious example is IBM).

This notion is a prevalent theme of Gates' new book which is only vaguely biographical — readers with an interest in Gates' sometimes eccentric personality or the history of the construction of Microsoft should consult other sources. The book is a hodgepodge of ideas about how the future information superhighway will be built, operate, and affect society. Gates dedicates early chapters to talking about the PC revolution and his own ideas in creating Microsoft, and his vision of the future "information superhighway." Lots of Dick-Tracy-wrist-radio gadgets are superimposed throughout the book. Gates tends to repeat himself in describing scenarios where various individuals benefit from readily accessible information; perhaps he should have collected and focused all these in one chapter.

At times the book reads like "A Mogul's Apology." What some might lambaste as domineering market imperialism, Gates chalks up as healthy competition. Much of the book is dedicated to describing the way the free market selects its own standards and priorities seemingly independent of the companies that create various products, while at the same time reassuring the reader that this is entirely appropriate, desirable, and in the case of the PC revolution a proven stellar success.

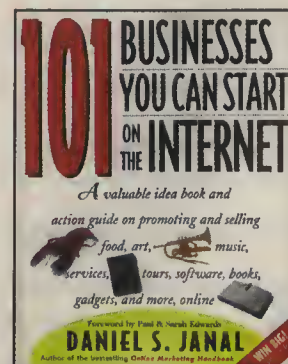
However, large parts of the population (such as those involved in the government) tend to disagree with the idea of unfettered capitalism as economic Darwinism. Anyone who believes that a "correctly implemented" information superhighway cannot be achieved without

"oversight" (that is, government regulation) will probably be endlessly incensed by many of Gates' chapters, which reiterate the supremacy of capitalism in bringing about a "cyberspatial reality" and the premise that the only significant or legitimate government role is to get out of the way.

The book has all the passion of a manual written by a computer geek; Gates and his cohorts seem to have gone to great lengths to scrub out anything even mildly controversial. People looking for cyberspatial investment advice from the computer industry's god are liable to be disappointed that Gates doesn't have any particularly incisive recommendation other than to watch the consumer trials of new technology.

If Gates had written this book 10 or even 5 years ago, he could have been recognized as a brilliant visionary by even jaded experts within the computer field. However at this date, particularly for anyone with even marginal cyberspace literacy, it has the flavor of bland, warmed-up leftovers. He has little new to say about cyberspace, computer technology, or social effects that has not been anticipated by other authors (e.g. Toffler, Barlow) and presented in a much more enthralling or stimulating way.

The only audience that is likely to be receptive to its pedagogical tone are those who have very little experience with computers or online services. Everyone else is likely going to spend most of whatever time they dedicate to his ideas listlessly surfing through the CD and consoling themselves that at least Gates has donated all his proceeds to putting computers in classrooms.



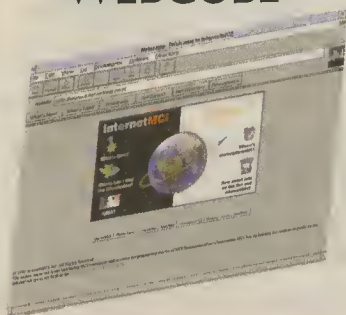
101 Businesses You Can Start on the Internet

By Daniel S. Janal
1996, Van Nostrand Reinhold
504 pages, \$24.95
ISBN 0-442-02202-6
(800)842-3636

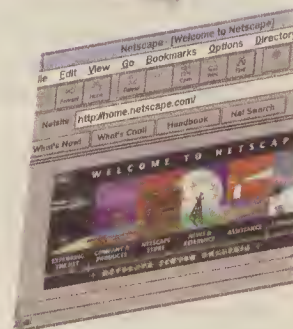
This book functions as a part reference manual and part introduction to Internet businesses. About 100 pages are dedicated to describing the Internet and a general overview of cyberspace businesses including discussions on order forms, business practices, startup requirements, etc. The remainder of the book is a collection of about 100 different questionnaires filled out by actual business owners. The answers to the ques-



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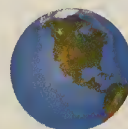
At the heart of the system is an Intel Pentium™ CPU running a 32-bit POSIX UNIX®-like operating system and powerful Web/Internet software. WebCube comes fully loaded with over 200mb of the latest Internet server software including TCP/IP, Web server & browser, Electronic Mail, News, FTP, a Netware® Client, and LAN Manager® compatibility - all easily administered with a user-friendly, graphical interface. We also include a complete set of industry-favorite Internet books on Web server administration and HTML development. The WebCube is designed with maximum scalability and modularity, allowing you to easily expand your system as your requirements grow — using standard, low-cost PC peripherals.

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tions tend to be either highly illuminating or extremely terse. The entrepreneurs as a group are probably some of the busiest people on the planet and not all of them give the impression the respondent was overjoyed to fill out the form. Some respondents were clearly reluctant to talk about aspects of their business such as profitability or other proprietary details.

However, the very human responses add to the realism of the compilation, which overall is likely to be invaluable to entrepreneurs who are brainstorming a business idea. There are many very valuable nuggets of advice throughout the book, but some may find the hunting a bit tedious. The book will be less useful to people who have particular business ideas in mind. Many of the respondents were starting up shoe-string ventures and give a very good idea exactly how much effort and money is required. The book would be an excellent guide for someone who already operates a business and wants to understand what is required to have an Internet presence.

Overall the book has the flavor of a community of business owners who might meet to discuss their own specialties and problems encountered. The author makes little effort to summarize the insights spread across all the surveys. There is a wide diversity of infopreneurs, from one-person, almost hobby-type sites up to high-profile commercial sites with high traffic and large staffs.

The layout of the book is marginal. Ideally it would be more like a phone book that is easy to browse, with more attention given to business name headings, white space, and formatting. Also, a good cross-referenced directory of all the businesses listed in the book is lacking. The index is a bit brief for the size of the book. The author does take pains to promote netiquette guidelines, putting "mailing list compiling" and "network marketing" in the section called Handle With Care. One hopes that somehow cyberspace will eventually evolve so that whether marketers learned "netiquette" from their introductory Internet book-du-jour will become irrelevant.



Researching on the Internet

By Robin Rowland and Dave Kinnaman

1996, Prima Publishing

384 pages, \$29.95

ISBN 0-7615-0063-4

(916)632-4400

The topic of research on the Internet is an extremely fast-moving field with new techniques and search tools arising every few months. It is likely that even in a few years the research approaches may be significantly or even radically different. Hence a book such as this focusing on Internet researching can go obsolete even faster than books about other cyberspace topics such as the Web.

Rowland and Kinnaman have done an excellent job of taking a snapshot of current developments and producing a handsome and attractive compilation. The writing is both high in content and a conversational, personable style that engages the reader. The enthusiastic style borders on cheerleading in Chapter 1. However this is appropriate for an audience that is intimidated by computers and the Internet. Seasoned Internet veterans are not likely to find anything particularly novel in this chapter.

The book layout is superb and highly aesthetically polished. Screen shots are high quality and relevant. The angle of the book tends to be less technology- than people-oriented. For example a chapter is dedicated to netiquette and another to conducting e-mail interviews. Emphasis is placed on linking up with communities that share research interests. Instead of a lone search by one person trying to hack through the Internet on his own, the book tends to give the reader the sense of an atmosphere or climate in cyberspace in which research can be a rewarding collaborative endeavor. Some interviews with various researchers and Internet celebrities are included, such as Michael Hart of Project Gutenberg.

The authors include many excellent guidelines and checklists of criteria for satisfying requirements of less-casual, more demanding, superior research. Other sections reinforce this with coverage on e.g. literary citations and legal issues. The only nit to pick is that the price is at the high end. Some very large Internet books with CDs sell at the same price. ♦

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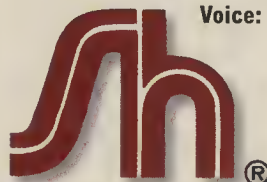
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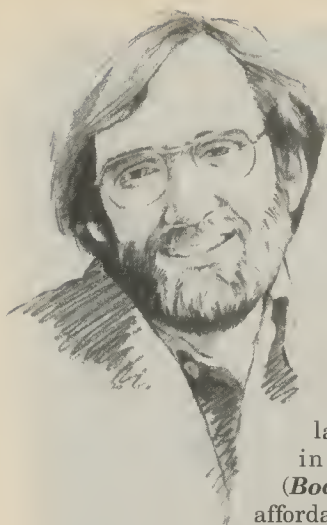
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EDUCATION LINK

by Rea Andrew Redd

Lucky to be LINQ(ed), 4.0

theLINQ

When *theLINQ* was introduced in late 1994 and reviewed in *Education Link*, (*Boardwatch*, May, 1995), the need for a safe, affordable, and organized Internet service for educational facilities was recognized by educators at that time. Now, in the spring of 1996, with the advent of the World Wide Web (WWW), the need has taken on different dimensions. *TheLINQ 4.0* features browser control for the WWW with access-restricted sites, filtered e-mail and linked Web pages for easier research from e-mail messages.

Students of any age have an innate ability for finding unsuitable content on the Net. (If they can't find it quick enough, they have a tendency to generate their own inappropriate material.) The *theLINQ* server comes with several hundred educator-approved Web sites stored inside it. Users may browse these sites as if they were browsing the Internet live, except even faster — at least as fast as a T1 line. This is possible because the *theLINQ* server is stored in the school building.

For schools with a live Internet connection and the *theLINQ's Live Internet Module*, Web browsing can be accomplished at three levels. Each access level allows users to browse only the Web pages contained in a given level's database of sites. The levels' contents are updated daily as the server is accessed automatically by the Scantron/Quality Computers server. To get more info, fatmail Scantron/Quality Computers: 20200 Nine Mile Road, St. Clair Shores, MI 48080; voice call (800)777-3642; mailto: sales@qualitycomp.com or visit their Web page at <http://www.thelinq.net>

THE CATHOLIC RESOURCE NETWORK

A computer, a modem, and a telephone line open a 24-hour, year-round world of Catholic information and services; *The Catholic Resource Network* (CRNET). Divided into subject forums hosted by an organization or priest who are experts in their subject areas, the researcher finds information on doctrine, spirituality, current issues, states in life, education, a marketplace, and a user assistance forum. Each forum has its own libraries, containing many text files available for downloading; books, articles, position papers, lists and Church documents are available. Each area has its own public message area; private e-mail is available with anyone on CRNET or the Internet. Real-time conferencing features special events such as question-and-answer sessions with a variety of leaders. The daily dispatches of the *Vatican Information Service* and CRNET's

daily news service can be browsed. The faculty of Christendom College is available for responses to FAQs. There is a special forum for home schooling parents who wish to share curricula, ideas and experiences.

The CRNET is available over direct-dial phone lines with a variety of subscription plans. The basic membership is \$25 and subscriptions can run from \$5 to \$20 a month and \$50 to \$200 a year. A special rate is available for overseas users. Any terminal software that supports ANSI or VT100/102 can be used to access CRNET, though the organization recommends Mustang Software's QModem Pro for DOS, QModem Pro for Windows and for Mac users, Hayes SmartCom II.

To call CRNET, set your modem to dial (703)791-4336 at any speed up to 14,400bps. The CRNET is a project of Trinity Communications: Jeffrey A. Mirus, P. O. Box 3610, Manassas, VA 22110; voice (703)791-2576; fax (703)791-4250. Those outside the U. S. should contact Michael G. Hains: 3/41 Sherwood Street, Revesby, NSW, 2212, Australia; voice +61-2-792-3507.

K-12 WEB BROWSER

Geography

The last earthly frontier may be Antarctica. Geography teachers can get there from here by using the WEB address <http://www.terraquest.com>; live chat with resident Antarctic scientists, digital panoramic photographs, and nearly 50 pages of background information on explorers, wildlife, environment, the ozone hole, and iceberg formation are all available with some of the best graphics on the Net.



Often in the spring, geography instructors will have the students plan a summer vacation in several continental regions or countries. You may increase interest among students by referring them to <http://wings.buffalo.edu/world> - an extra-large directory of worldwide travel information. At <http://www.travelweb.com> a student would find hotel/motel data and at <http://www.cathay-usa.com> and <http://www.iflyswa.com> they can find Cathay Pacific's and Southwest Airlines current prices.

An electronic book, *The Rough Guide*, is available on the Web at <http://www.hotwired.com/rough>.

Rea Andrew Redd lives and works in southwestern Pennsylvania where he manages a high school library, teaches European history and Scholastic Achievement Test preparation. On occasion, he reenacts American Civil War battles with the Ninth Pennsylvania Reserves, an historic, military impression unit. E-mail Rea at: redde@genesis.dug.edu

Added in 1995 and recently in 1996 to the Web, these guides for the USA, Mexico, Canada, and Europe are updated monthly; if you went to a bookstore, you would have to shell out about \$20 to take a Rough Guide home; on the Web it's free. Advertising the electronic version to come to you at no charge; but of course, it is less portable for the traveler, yet for the geography student researcher it is quite handy.

American History

Colgate University offers 48 letters from an American Civil War private; previously unpublished, these letters from New York soldier Galutia York present the perspective of a 19-year old farm boy as he travels across the country beginning in August 1862 until his death in Louisiana in May, 1863. Send your students to <http://exlibris.colgate.edu/gyork/>; you probably have in your course text a student skills page devoted to handling primary source documents.

Government

Privacy issues and free speech on the Net are dealt with by the Center for Democracy and Technology, which is one of several non-profit advocacy groups focusing upon liberty, democracy and technology. Get their point-of-view and the data to support it by logging on to <http://www.cdt.org>. A more pointed expression of the issues and their possible solutions are found in Brock Meeks' personal column; the Washington, D.C.-based writer, offers his political opinions at <http://cyberwerks.com:70/1/cyberwire>.

Legislative and legal issues involving the Internet and communications can be found at the Electronic Frontier Foundation's <http://www EFF.org>. The Electronic Privacy Information Center is more broad in its focus; issues of privacy, medical records, credit records, cryptography and the National Information Infrastructure are its agenda at <http://epic.org>.

Health and Physical Education

What appears to be an unlikely partnership between a Hollywood studio and a pharmaceutical manufacturer has resulted in a women's health bbs. At <http://www.womenslink.com> Women's Link, a Paramount Studio and A Bristol-Myers Squibb collaboration delivers tips on health, fitness, nutrition, style and beauty. For an introduction to trauma (as a topic) visit Pain Net, Inc. at <http://www.painnet.com>

and, of course, there is a marketplace that sponsors this location.

Language

Is there an electronic version of *Ripley's Believe it or Not?* If there is, then under the category of Paradoxes, you may find Giorgio, perfume manufacturer and the promotion of poetry and prose. "Hugo," a new line of men's fragrances for Griogio, Inc., is sponsoring the Hugo Wordslam site. A gallery of exhibits from Kerouac to Frost includes biography and works of famous poets. Aspiring poets can e-mail entries in several ongoing competitions; prize money is at stake. Now that's student motivation. Set your poetry students loose at <http://www.wordslam.hugo.com>.

Get cast biographies and background information on the productions of Andrew Lloyd Webber at <http://www.reallyuseful.com>. Portions of scripts, staging instructions, costume designs and audio clips from cast recordings of Cats, Phantom of the Opera, Sunset Boulevard, and Aspects of Love are offered at the site.

Visit a publisher's bookstore to catch the current trends in popular literature; <http://www.berkley.com> will take you through the doors of the Putnam Berkley Bookstore Cafe.

Art

Nearly 5,000 items have been assembled with an index at the World Wide Web Arts Resources site; <http://www.concourse.com/wwar/default.html> is a site in which you can easily lose yourself for an hour or more of browsing.

Library

Reference information on the most recent Nobel Prize winners is located in Sweden's Nobel Foundation's sites <http://sunsite.unc.edu/nobel/presreleases.html> and <http://www.nobel.se>.

AIDS information is current and accurate at <http://www.thebody.com>; organized by subjects, this data is friendly to the student researcher. Sponsors of the bbs include the Center for Disease Control and Prevention, the Lambda Legal Defense and Education Fund, the American Foundation for AIDS Research, and the AIDS Action Council.

A tip of the librarian's hat to Digital Equipment Corporation of their Alta

Vista Web site, <http://altavista.digital.com>. Alta Vista came up in late 1995 and claims access to all the billions in 16 million Web pages, plus a full index of over 12,000 newsgroups. Check the word "health" and you get the first 10 of about 800,000 matches.

Campus Life

Tripod, a BBS for college students and soon-to-be college students, covers such topics as work, money, health, travel, and school related stress. Diverse current news on national and state political involvement by students and tips on spring vacations for the frugal can be found at <http://www.tripod.com>; Tripod's weekly interviews, with psychologists and newsmakers, are usually interesting and appropriate.

MEMO FROM THE DEEP POCKETS DEPARTMENT

Do you feel unworthy of the government's money? Do you think that it wouldn't be interested in what you hope to do in your school and community? Do you think your grant application will have little creative appeal? Well, listen. The federal government announced the availability of \$36 million in grants just months ago; that's \$12 million more than last year's grants. These funds are for projects to help bring the benefits of computers and telecommunications to low-income citizens who otherwise do not have access to technology. Among the Commerce Department's grants to 117 projects, up from 96 in 1995, in schools, libraries and community agencies were several amazing endeavors. How about voice mail for the homeless and phoneless? Individuals who are looking for housing, jobs and social services in Phoenix, New Orleans, and Austin, can now receive the benefit of the Department of Commerce's largess.

If you have ever lived in rural or inner-city America, you have probably heard of or even used a bookmobile that represents the local library. Well, if you live in rural Texas, the *NETmobile* may soon be arriving at your crossroads. Farmers and rural business owners are expected to discover ways in which the Internet can help them when the Netmobile rolls into town. The National Adoption Center (NAC) now has Internet access thanks to the Department of Commerce grant; NAC's database of children available for adoption is now available on the Net. The National Telecommunications and Information Agency's list of available grants and applications is on the WWW at <http://www.ntia.doc.gov>. ♦

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GOVERNMENT ACCESS by Jim Warren

PUSHING ONLINE PRESIDENTIAL DEBATES

This concerns my January proposal — published in Boardwatch last month, with similar proposals circulated in other print and online venues — that we push to have major-party presidential candidates debate, on the nonproprietary public Internet. The original proposal was to do these debates via USENET newsgroups, but given their susceptibility to forgery, the current plan is to carry them on secure web-servers supplemented with e-mail access alternatives.

As of early January, several candidates or campaigns have expressed active interest in the possibility of online debates, but none has formally committed. This isn't surprising; the formal proposal was first distributed to them in the beginning of January.

However, already several editors and reporters from major regional newspapers have expressed interest — which is a potent stick with which to flog this donkey (in this case, the Republican elephant) into desired action.

The idea is (1) to get the “tradition” of online presidential debates started this spring with at least two or three of the better-known Republican candidates — most of whom are desperate for any kind of publicity, especially low-cost publicity, and then (2) try to leverage that into online debates between at least the two major party candidates before next November's presidential election.

Once it is established and successful, and publicized by the mainstream press — for its novelty if for no other reason — then it may become an expected and demanded prerequisite for all serious candidates in the future. Well, at least when there is either a pack of candidates seeking publicity for their views, or a closely contested election where at least one major candidate is willing to participate and the other dares not refuse. (Note that the time and place “scheduling conflicts” problem/excuse evaporates for online debating, as does the “pretty face” issue that helped Kennedy beat Nixon in the first race that had major televised debates.)

For the latest information on this fast-changing project, subscribe to my GovAccess listserv by sending the e-mail message, “subscribe GovAccess <yourEmailAddress>” to Majordomo@well.com, of

course replacing “<yourEmailAddress>” with your e-mail address. (One would think that would be obvious, but I continue to be amazed at the number of listserv subscriptions that arrive with “YourEmailAddress” or “FirstName LastName” or some such, in place of what was obviously intended.)

HELP MAKE DEBATES HAPPEN

Online debates will not happen unless the candidates see their publicity potential and feel people are interested.

You can help precipitate these debates by writing — preferably faxing — each of the following campaigns and politely but firmly (and briefly) urging that their candidates promptly agree to participate; especially if they expect to lead the nation into the 21st Century where this potent medium will become a standard tool for political discourse.

If the debates have not already begun by the time this column appears, you can also point out how much publicity each participant will receive in the mainstream press —

simply by participating in the first-ever online debates by major-party presidential candidates.

Also point out that it's a valuable — and free — active outreach method for candidates to circulate their views to at least thousands and perhaps several million voters, folks who increasingly seek information online, for all sorts of personal and professional decisions.

And remember: regardless of whether we pull this off for some of the primaries, we also want to push for online presidential debates shortly before the general elections, next November.

Note: It is best to write or fax; do not phone. Phone requests are likely get buried for all but the “smallest” of candidates.

Address your requests to the candidate — but be sure to make it “Attention of:” their *campaign manager*. Otherwise, if it's addressed only to a major candidate, it's likely to get lost in the blizzard of incoming campaign mail — some of which is wildly bizarre.



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Warren [345 Sweet Rd., Woodside CA 94062; <mailto:jwarren@well.com>] works on technology-related civil liberties and open-government advocacy, and currently serves on the California Secretary of State's Electronic Filings Advisory Panel.

Warren has received the Dorak Lifetime Achievement Award (1995), the Hugh M. Hefner First-Amendment Award (1994), the James Madison Freedom-of-Information (1994) for his efforts to open online access to government, and the Electronic Frontier Foundation's Pioneer Award (1992). He founded InfoWorld and the Computers, Freedom & Privacy conferences (1991); was founding host of PBS television's “Computer Chronicles” (1981) and founding Editor of *Dr. Dobbs' Journal of Computing* (1976).

And if yer willin', send a second request a day or two later, addressed to the attention of the press secretary — who will probably be most attuned to the publicity value of such novel [thus, newsworthy] online debates.

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fax 615-340-0397
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WHY ONLY REPUBLICANS?

It's purely pragmatics. If we are to have online prexy debates, we have to start somewhere. If they are to have major national attention and interest, we have to start with those candidates who have some national name recognition. In this year and this particular case, the Republican primary — with its glut of candidates, some with national name recognition, seeking any exposure — is where the mainstream media is focused, as far as national political campaigns is concerned.

And, the whole idea of doing this is to get online prexy debates started — established as politically acceptable and of interest to the mainstream press. If the establishment press will cover it, then the candidates will come.

If we can get this to happen this spring, then it will be that much easier to have it happen next fall. If it happens next fall, it will be a major precedent for all future presidential campaigns.

Why not include all of the other parties' candidates — Libertarian, Peace and Freedom, American Independent, Green Party, etc.? The current problem is, the major-party candidates don't feel that it is essential for them to participate in this project; and their participation is voluntary and optional. And the more prominent they are, the less they will be willing to participate in optional forums that would give publicity and exposure to their rivals in the numerous "minor" parties.

There is certainly nothing to keep those who wish to do so from setting up similar online forums for the minor-party candidates — or, for that matter, trying to get the major-party candidates to enter into a debate with minor-party candidates. Good luck!

In the meantime, I'm taking it one step at a time — choosing the biggest step that I think has a possibility of being taken, that also establishes online prexy debates as being valuable, perhaps essential, for major-party candidates.

It's said that politics is the art of the possible.

THE HORSE'S MOUTH

Among other events, Jim Warren will be speaking before the California Association of Licensed Investigators, on April 27th in San Jose CA. For more information, contact CALI's Jim Pell, mailto:JimPell@aol.com or (408)263-1088. ♦

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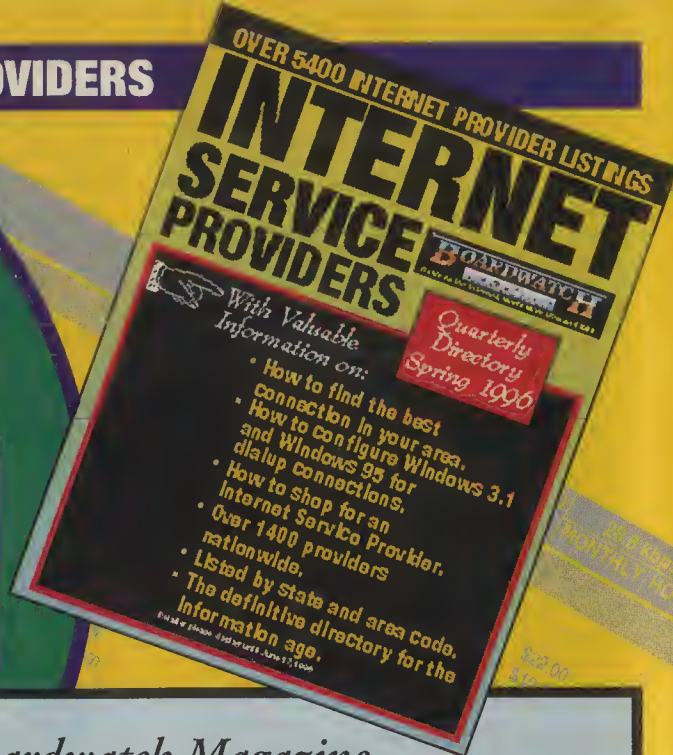
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MACINTOSH NEWS

by Bill Gram-Reefer

TELEFINDER & RESNOVA BLEND BBS WITH WEB

At MacWorld Expo, Spider Island Software released version 5.0 of its TeleFinder bulletin board system (BBS). TeleFinder BBS 5.0 adds server support for World Wide Web (WWW) documents, including the capability of letting remote subscribers serve their own web pages as virtual hosts, a first for Macintosh web servers. With the addition of a POP3 mail server, combined with its reliable BBS functionality, TeleFinder looks like one of the most complete Internet servers available for Macintosh today.



The TeleFinder Web Server supports all HTML commands and is Java-ready, capable of running applets for added functionality. TeleFinder Web Server supports CGIs and ACGIs, the standard gateways that let Web masters provide browsers with access to a variety of forms, databases, surveys, or other services including FTP, Gopher, Finger, and BBS-related features like chat rooms (more about this later). TeleFinder's Web Server employs threading, intelligent buffering and asynchronous I/O to deliver next-generation performance compared to MacHTTP.

Using TeleFinder BBS 5.0, System Operators (sysops) will have the option of creating personal "Web Spaces" for their BBS users. Sysops will also be able to monitor and bill for page storage and/or usage. While other Macintosh-based web servers can only serve one home page address per Macintosh, TeleFinder BBS subscribers will be able to create their own personal home pages that can be maintained directly through TeleFinder's graphical BBS interface via regular telephone, ISDN, LAN, or Internet connections.

The POP3 mail server is capable of supporting e-mail clients like Qualcomm's Eudora and Claris E-Mailer. TeleFinder can support these clients even at sites that lack an Internet connection by simply using MacTCP over Ethernet and TeleFinder's built-in mail routing. TeleFinder BBS 5.0 also enables sysops to add Mail-List capabilities using POP3 listservers including Lueca Software's freeware Macjordomo or Star Nine's commercial ListStar for POP3 servers.

Spider Island added a host of other administrative and user features including User Manager control over mail gateways at the Access Group level, native support for Open Transport TCP-IP in TeleFinder User client software, as well as in the Mail and BBS Servers. Additionally, TeleFinder BBS 5.0 now supports AppleScripting, Japanese character sets (ISO 2022-jp), scheduling of utility programs, USENET newsgroup support via NNTP Sucker, and the ability to relay SMTP messages on behalf of other servers.

TeleFinder remains the only Mac-based BBS offering an unlimited user license in its base package. The retail price of **\$675** includes BBS, POP3 and Web Servers, 2 BBS lines and unlimited Mac, Windows and DOS BBS users. The Web Server supports unlimited simultaneous web connections. TeleFinder 5.0 is a free upgrade to TeleFinder 4.0 users and is a **\$95** upgrade from 3.0. Shipping for the first time on CD-ROM, TeleFinder 5.0 will include a pile of goodies including a developers' kit for linking web pages to the e-mail side of TeleFinder BBS and sample code for building web gateways, essentially a CGI shell.

The CD will also include some ready made C-based CGIs including a Finger client, Guestbook, and Wisdom — a fortune cookie hoot that displays various random messages each time the hot-linked icon is clicked. Another CGI will create HTML versions of BBS file folders on the fly including thumbnails and file descriptions so Web users can browse the BBS files for downloading. The CD will also include graphics, buttons, arrows, pointing hands, and some backgrounds to help Web masters create pages.

Incidentally, TeleFinder provided BBS support for the February 8th "24 Hours In Cyberspace," a day long Internet-based multimedia event produced by the Against All Odds Productions family of companies, creators of the renowned "A Day in the Life" photography series, "From Alice to Ocean," and "Passage to Vietnam." <http://www.Cyber24.com>.

There are some interesting issues concerning this functionality, and perhaps more importantly, the whole question of how to integrate Web and BBS and, for the more cynical among us, why?

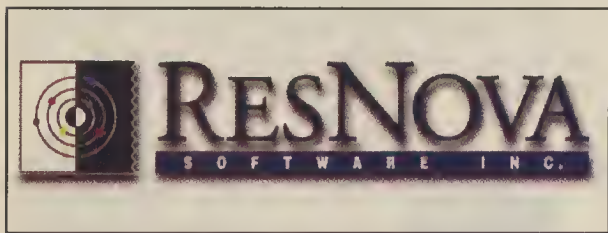
First, though, the ability to let BBS users host their own web pages and maintain them remotely is a cool item. This means Mr. or Mrs. Sysop can focus on server issues and let subscribers build or change web pages to their hearts' content. Users' addresses will be in the style of <http://www.spiderisland.com/~chris/> where BBS user "Chris" can do anything within that personal web space following the tilde,

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including home and multiple linked pages. The only restriction is no CGIs within personal web spaces, only system wide, sysop-sponsored ones.

One TeleFinder sysop is ecstatic. Steve Creel, production supervisor for Communication Arts, a leading regional prepress service bureau based in Birmingham, Alabama, thinks the virtual hosting capability is a great solution. "This week I've had two clients that need to update Web Pages almost daily, and they want a quick and easy way to update them from home or office. Being able to download, edit, then upload pages to their own Web Space folder solves this problem beautifully. Ease of use is my top concern since many of these clients are Net newbies whose eyes truly glaze over when I start talking about 'FTPing HTML to proprietary directories.'"

RESNOVA'S NOVASERVER



The larger issue of course is why BBS when you can Web? For some perspective on this, let's take a look at ResNova's NovaServer 4.0.3 in addition to TeleFinder 5.0 described above. At this time, these are the only two dealing with this question with actual shipping product. I don't include SoftArc's FirstClass server platform in this discussion since, according to SoftArc's White Paper published last year, native support for WWW is scheduled for some time in 3Q 96. In the meantime, following its long-standing tradition of third-party development, one most likely will see initial BBS-Web gateways for FirstClass from Delphic Software real soon now.

In contrast to TeleFinder 5.0, which provides a separate Web Server with which one can build integrated interactive links to the BBS side, NovaServer qua BBS is an HTML-based hybrid. In fact, ResNova's WindowScript is at bottom an HTML editor. Lists of messages in a NovaServer mailbox are in fact HTML documents. Pictures, graphics, text, all manner of elements can be hotlinked.

NovaServer's client software also has a built-in browser so that without any IP connection, a remote user can log onto a NovaServer via local dial-up connection, read HTML mail and download a file, post a conference message and then go surf the web without paying Netcom. If the mail message has a hotlink in it, the reader can just click on the link and, if the server has an IP feed, go directly to that particular URL out on the Internet. This is cool, too. There are, however what some nit pickers might describe as limitations.

For instance, consider the way Galacticom implements its "pass-through SLIP" on the Wintel side: once the SLIP or PPP connection is made, remote users launch any standard IP client for mail, FTP, WWW, IRC, Telnet, Gopher, or Wais and go do lunch. In the current NovaServer architecture, however, each supported IP service is a part of the graphical client and server software. Users of the client software are "limited" (if that's the right term) to only those IP services ResNova has been able to add to its server and client. In a recent chat with ResNova, John Cantor explained that plans call for adding FTP capabilities. And he makes the strong argument that with Web, Wais, and maybe FTP, plus access to BBS functionality like chat, conferences and BBS downloads, what else do you really need?

From the Web side, one can use Netscape to view a NovaServer BBS page, but then again only in limited fashion, not being able to access the graphical functionality of the BBS because you're only using some web browser, not the proprietary GUI client. So, in the end, although NovaServer can serve HTML I don't know of anyone actually using it qua Web server ala WebStar serving web pages. Instead, systems like Greyhound Town (<http://www.greyhoundtown.com>) are serving BBS pages.

In summary it appears that where NovaServer gets at web via BBS, TeleFinder provides both BBS and Web servers with roll your own links between. That may not be the best way to say it, but it's early yet in a new industry so let's just keep making this stuff up and see what sticks. Anyways, there are at least two strategies on the market now.

But why? Why try to marry BBS and Web? Isn't it bucking the explosive trend toward Web becoming the standard?

Standard what? First of all, I thought IP was the standard. Not some particular IP service. Not some proprietary graphical user interface engine. Secondly, the masses of people around the globe who do not have nor can afford IP access can still access a BBS via a phone connection where they cannot directly access a web page over the Internet. Thirdly, aside from the fact that nobody's figured out exactly how to make any money on the web yet — and basically won't until MasterCard and Visa figure out for themselves what standard they want to use for secure payments— as communication, the Web just ain't all that exciting. In fact, if you entertain even an itty-bitty notion of communication being a two-way or many-to-many affair, then the web hardly even qualifies.

Everywhere but nowhere. "The Web is for publishing. BBS is for communicating," says ResNova's Cantor. "BBS enables better group communications and serves specific communities of people better where the web is global and heavily tilted toward one-way messaging." Spider Island's Rusty Tucker says, "In terms of functionality, most web pages are pretty boring. They seem hollow like nobody's home. That's where the excitement of BBS functionality like conferences, live chats and online games comes in, especially those areas that just can't be implemented well within the HTTP framework. By adding web services to TeleFinder, it's about getting the links set up to make web pages more dynamic and easier to use and administer, especially for remote users." ♦

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MICROSOFT WATCH

by Durant Imboden

BLACKBIRD, A.K.A. INTERNET STUDIO

As a person who changes direction with all the speed and panache of a supertanker, I've chosen to maneuver slowly away from my Microsoft Network News column rather than set full sail (steam? diesel?) for new waters. Besides, anyone who thinks BillG@microsoft.com

isn't going to be a major player in the Internet and online market is slightly less prescient than the ex-captain of the Exxon Valdez. So I'll continue to focus on Microsoft until Jack Rickard and David Hakala tell me to shut up — or until I stumble onto an interesting topic that hasn't already been grabbed by one of the many Boardwatch writers whose online credentials are far better than mine.

Blackbird, a.k.a. Internet Studio

Microsoft Blackbird was one of the most-hyped features of The Microsoft Network when MSN was recruiting independent content providers last year. At demonstrations for the press and ICPs, bright young developers in Microsoft polo shirts used imaginary Blackbird versions of *Wired*, the *Seattle Times*, and the *Wall Street Journal* to illustrate how big-league publishers could use slick graphics and remote servers to create proprietary environments on MSN.

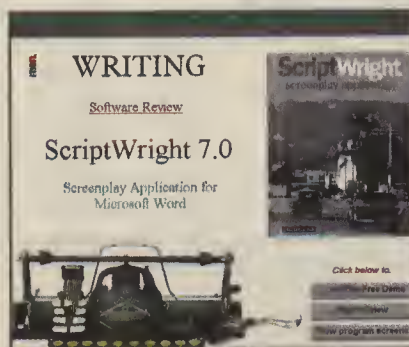
Times have changed, and The Microsoft Network is now being billed as an "on-ramp to the Internet" rather than a proprietary online service in the style of CompuServe or America Online. Some observers have taken this to mean that Microsoft's Blackbird project is dead, or that it will be scaled back into a handy but strategically irrelevant product for delivering content on MSN. They insist that Java represents the future of the Internet, and that Microsoft will put its money into Web servers and Visual Basic Scripting instead of piddling about with an overhyped over-the-wire publishing tool.

Well, maybe. But don't toss a pastry crust over Blackbird and turn on the oven just yet. The product has been given a new name — the **Internet Studio Visual Publishing System** — and is repositioned as a collection of tools for creating content on the World Wide Web. And under any name, the software is so "really cool" (even in beta) that it may quickly earn a following among Website designers.

A STEP BEYOND HTML

A few years ago, when the Web was new, most of us were wowed by its hypertext links and document look. Never mind that text was displayed unpredictably, or that slick graphics were difficult to implement, or that printing a Web page could be an exercise in frustration. For all its irritations, the World Wide Web represented a quantum leap beyond Gophers and other traditional Internet tools—even if the speed of most Web pages was less a leap than a crawl.

Today, with Netscape's extensions and the emergence of HTML 3.0, Web pages are taking on a glitzy look at the price of skyrocketing download times. Plug-in products like Adobe Acrobat are also changing the face of the Web, albeit with varying (and limited) success.



Blackbird title from MSN's Writing forum

Microsoft's Internet Studio represents the next step in the post-HTML evolution. Unlike HTML, Internet Studio gives the designer total control of the display space. It lets the designer build screens with an interactive CD-ROM look and feel, including support for voice, sound effects, music, and animation. Just as important, Internet Studio uses wavelet compression, progressive rendering and other techniques to optimize real and perceived performance with today's analog modems. This makes it especial-

ly appropriate for content aimed at home and small-business users who use dial-up connections to the Internet.

AN EASY-TO-USE PUBLISHING TOOL

If you've ever used Microsoft Publisher, the reigning usability king among DTP packages, you'll have an idea of what it's like to create online material (called "titles") in Internet Studio Designer. Even a beginner can design elaborate titles with internal links, shortcuts to MSN or Web sites, and other controls — all without writing a single line of code. As I struggled with this column on my laptop, my 13-year-old son was creating his first multi-screen Internet Studio title by trial and error on my desktop 486. And when I put together my own debut title — a four-page document with scanned-in photos, screen captures, and a link to an MSN file library — the process took barely a day, including preparation of the artwork in Corel Photo-Paint.

Durant Imboden is a freelance writer who manages the Writing forum in the Arts & Entertainment category of The Microsoft Network.

His credentials include published novels, articles, and short stories; fiction editing and staff writing for *Playboy*, representing authors at a New York literary agency; and freelance copywriting for Lotus, Apple, Northwest Airlines, US West, and other national advertising accounts. When not typing, Durant is a volunteer announcer at local, state, and sectional figure-skating competitions. **Mailto: Durant_Imboden_MSN** on The Microsoft Network or **writing@msn.com** on the Internet. The author is not an employee or spokesman for Microsoft.

A PLATFORM FOR ORGANIC CONTENT

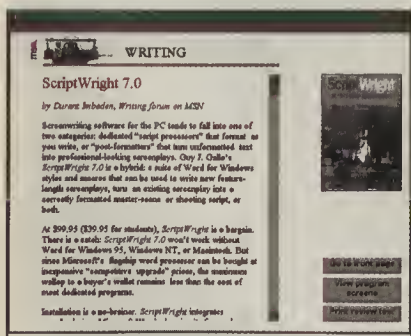
Much of today's information is dynamic, not static. Product information, news stories, financial reports, membership directories, events calendars, and technical bulletins are examples of material that needs frequent updating when published online.

Traditionally, the sysop or Webmaster has had two choices when dealing with such information: (1) present it as plain-vanilla text with a few photos sandwiched in, or (2) present it in an attractive, highly formatted manner at the cost of frequent page redesign. Internet Studio gives the online publisher the best of both worlds: the ability to design attractive titles that can be updated automatically through the use of "dynamic stories."

AN EFFICIENT VIEWER

Internet Studio publications are viewed with runtime software that downloads the first time a user activates a Blackbird title. From then on, selecting an Internet Studio title in a Web browser, on MSN, or in an e-mail message will launch the viewer and display the title.

To save time in downloading, Internet Studio stores common OLE-based design elements in a cache on the user's hard disk. This means the user's PC doesn't have to download every element of every title. Instead, it downloads only the portions that aren't in the cache.



"Dynamic stories" can be displayed with a scrollbar (shown here) or on a series of pages.

I've been impressed by Internet Studio's speed in downloading and opening titles from MSN during my own testing. While writing this column, I used a 28.8Kbps modem to download a professionally designed title with photos, text, and artwork. The first graphics-intensive screen dis-

played in about 20 seconds, including the time required to launch the viewer. Progressive rendering of photos and illustrations made the display time seem even faster.

BUILDING INTERNET STUDIO TITLES

Let's take a look at the steps involved in creating and publishing a simple first-generation Internet Studio title on MSN:

Step 1: Create a project.

Internet Studio includes a project editor that lets you create "projects" of one or more titles. For example, you might store your baseball titles in one project, your figure-skating titles in another, etc. This is a handy feature, since it lets you update and save all related content with a single click of the mouse.

Step 2: Add a title.

Once you've named your project – "Software Reviews," for instance – you use the standard Windows File New command to start a new title. Since I'm providing the sample title, let's shift to the first person singular and call my title "ScriptWright 7.0 Review." (The title will be an evaluation of Guy Gallo's screen-writing application for Microsoft Word.)

Step 3: Organize the title.

I'll need a cover section, a review section, and a section for screen captures. I'll also need one or more pages for each section. I create these with a few clicks on Internet Studio Designer's main toolbar.

Step 4: Gather resources.

It's time to add content in the form of stories, photos, artwork, and possibly sounds.

Since my title is a software review, I open Microsoft Word for Windows 95. I use the Internet Studio template to write my ScriptWright 7.0 story, which I save as a .BDF (Blackbird Data Format) file. I resist the temptation to embed photos and links, since I've already decided to put those on the title's screens.

I now tweak my assorted logos, scanned photos, and screen captures with a third-party application (in this case, Corel Photo-Paint). I don't have to worry about file types, since Internet Studio imports BMP, JPEG, GIF, WMF, TIFF, and most other graphics formats. Nor do I need to decide whether to use 24-, 16-, or 8-bit color, because the Internet Studio viewer matches the

title's color depth to the user's display. (The viewer also takes advantage of font smoothing, an optional feature of the Windows 95 Plus Pack.)

Finally, I go back into Internet Studio Designer and use the "add content" button to import and automatically compress my text and artwork—or I use my mouse and Windows 95's Explorer, if I prefer the drag-and-drop approach.

Step 5: Design the pages.

With my Scriptwright 7.0 title open, I click on "Cover Page." I select the Caption tool and draw a frame (or "control") in the approximate location where I want my headline. Next, I double-click on the caption frame to bring up a dialogue that lets me enter text, fonts, colors, and other properties. I repeat this process for my overline and subheads.

I use the Picture tool to draw controls for my bitmapped Writing forum logo and a scanned photo of the ScriptWright package. Again, double-clicking lets me designate what goes in each frame.

Finally, I click the Caption Button tool to make a series of beveled buttons. These buttons will let the user download a ScriptWright demo from MSN, read the text of my review, or look at screen captures from the program. (If I wanted to, I could also link to Web sites from my Internet Studio title.)

I follow a similar procedure on the "Review Page," only this time I insert a "dynamic story" with optional scrollbars. This story is the ScriptWright Review.BDF file that I created in Microsoft Word. My last design chore is to lay out the two pages of screen captures from ScriptWright, which I've imported as wavelet-compressed Windows .BMP files. This process takes only a few minutes, since Internet Studio lets me enlarge or shrink the pictures by adjusting their frames with my mouse.

Step 6: Preview the finished job.

Having saved my project, I click the Run command to launch the Internet Studio viewer. My ScriptWright 7.0 Review looks perfect, and all the controls work just as they should. (Or at least, that's what I pretend, since there isn't room to describe my aesthetic gaffes and absent-minded goofs in this column.)

Step 7: Release the title.

Thousands of software-hungry screenwriters are waiting to hear about

ScriptWright 7.0, so I dial MSN and create an object in the Writing forum. I label the icon "ScriptWright 7.0 Review."

Next, I click Release on the Internet Studio project menu. The Release Wizard takes me through the steps needed to upload my title to the MSN Data Center. The whole process takes just two or three minutes, including the upload.

FUTURE FEATURES

By the time you read this column, Internet Studio will be in use on The Microsoft Network. A version that allows hosting of new or existing Internet Studio titles on the Web is due in 1996-possibly by summer, although no release date has been announced. Microsoft also claims that a Blackbird viewer for Macintosh will be available later this year.

Other enhancements will include OLE automation, support for C++ and Visual Basic Scripting, Java applications, e-forms, Secure Transaction Technology (STT), MacroMedia Director Movies, and Intervista 3D VRML "worlds." Some of these features may be working by press time.

In addition, the Internet Studio viewer may be built into forthcoming versions of Microsoft's Internet Explorer browser. For up-to-date information, visit Microsoft's Internet Studio web page at <http://www.microsoft.com/istudio/default.htm>.

A FINAL WORD

Let's be candid: I manage a forum on The Microsoft Network, so I'm not about to trash a Microsoft product in the pages of Boardwatch or anywhere else. Still, I chose this column's topic only after I'd worked with the Blackbird beta and become one of the converted. And when I obtained Microsoft's permission to demo the beta of Internet Studio at a conference of European museum directors, cultural officials, and artists last December, my audience seemed genuinely impressed by what they saw.

It's too early for you to develop Web sites with Internet Studio in any case. What you can do is sign up for a free 10-hour trial membership on MSN if you're using Windows 95. View MSN's Blackbird titles and see for yourself if Internet Studio is a potentially useful tool for your Website design. (While you're at it, use the "Go" word WRITING to visit my Writing forum. At this stage of MSN's growth, every bit of traffic helps!) ♦

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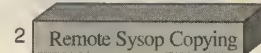
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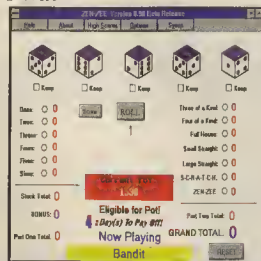
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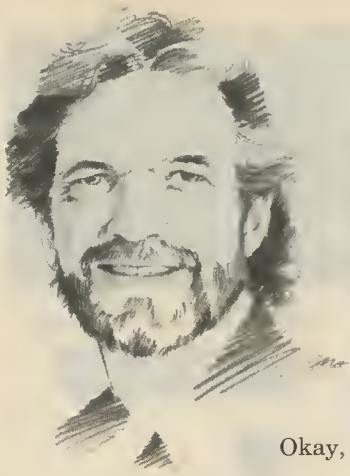
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MANNING THE WIRES

by Ric Manning

NEW WEB SITE TRIES TO PUT A SMILE ON THE IRS

Think of a government site on the World Wide Web that is least likely to present a warm and friendly face.

Okay, besides Bob Dole's home page.

How about the Web site for the Internal Revenue Service? You would expect the home page to be drab and humorless, just like the IRS itself. All the text would be displayed in tiny type that you couldn't read without goosing up your font display. Even then, you'd probably need a lawyer or an accountant to understand what they're talking about.

But its expectations like those that make the newly-redesigned IRS Home Page at <http://www.irs.ustreas.gov> such a pleasant surprise.

The place has all the characteristics of a quality Web site: It's well-organized, useful, easy to navigate and pleasing to the eye. If its purpose didn't involve picking your pocket, you might even call it entertaining.

That was all part of the plan, said Steven Shaffer of Websys, the Virginia-based multimedia design firm that created the IRS's new Web site. The company had previously created Internet services for clients in the government, financial and political arenas, including GOPAC, the controversial political-action committee that's associated with House Speaker Newt Gingrich.

"With GOPAC, we had developed a reputation for doing Web sites for organizations that needed an image enhancement," said Shaffer. "If anyone needed a new image, it's the IRS."

Shafer's team of about 35 designers, programmers and database experts worked on the IRS site for about four months. He said the team's first goal was to humanize the IRS.

"We wanted it to be a little bit funny, maybe even irreverent. We wanted to show that they're not a bunch of jack-booted Treasury Department thugs," he said. "Using the Web gave us the opportunity to rewrite the IRS's image from scratch. That's the great thing about the Web — nobody has an idea of what the subject should look like."

The opening screen looks more like a supermarket tabloid than a government publication. The Digital Daily declares that it's "faster than a speeding 1040EZ." It's "printed daily . . . and you don't have to recycle!"

Yet behind the goofy facade is some serious and useful information.



IRS spokeswoman Jodi Patterson said much of the Web site traffic come from people looking for tax forms. Last year during the prime filing period, the IRS site distributed more than 3 million forms and publications. On April 17, the last day for filing, the agency's FTP site was hit for a download every one and half seconds.

The new site, which contains more than 4,000 pages of data, is also drawing a heavy volume of traffic. On Jan. 8, the first day the new site was online — but before it was announced to the public — Patterson said it got 220,000 hits.

In addition to improving its image, Patterson said the IRS also wanted to streamline delivery of IRS documents. "This year our budget has been cut and in lieu of hiring more tax assisters, we looked at alternatives" including electronic access, she said.

"We wanted to lower the cost per contact for the Internal Revenue Service and get the information out more efficiently," said Shaffer. "The things we hear about the IRS is that it's too hard to get to them. We wanted to dispel the notion that the IRS is unresponsive."

The Web site offers a long list of IRS publications and forms, including Publication 17, the booklet that contains tax filing directions, example tax returns, forms, tables and worksheets. The forms can be downloaded as ASCII text or in a PDF format that mimics the official IRS form. The site also offers documents through fax-on-demand.

Other features include:

- News and notices from the IRS, including a summary of tax changes that took effect in 1995.
- A map to show you where to file your return.
- Tax Trails, an interactive question-and-answer feature to help explain rules on deductions and credits.
- Tax Stats, a collection of statistics about tax collection and where your money goes.

One thing you can't get on the site is an answer to your personal tax questions. Patterson said the volume is just too overwhelming to allow for personal responses.

Ric Manning writes about business technology, computers and consumer electronics for *The Courier-Journal* in Louisville, Ky. His weekly column called *Home Tech* is distributed to more than 80 newspapers by the Gannett News Service and it's available on the World Wide Web <http://iglou.com/gizweb>

Ric was the founding editor of *Plumb* and *Bulletin Board Systems*, two newsletters that covered the BBS arena in the early 1980s. His freelance work has appeared in several magazines including *PC/Computing*, *Mobile Office*, *PC Week* and *Home Office Computing*. Ric lives in Southern Indiana with his wife, two children and a champion Weimaraner. Write to Ric at <mailto:ricman@iglou.com>

Intuit, the maker of Quicken, launched a new Web site in December to support the business version of

And, if you're fed up with paying federal taxes, you might check out a site that promotes a class-action lawsuit against the IRS <http://irs.class-action.com>. The site promotes the argument that the IRS violates constitutional protections against cruel and unusual punishment and involuntary servitude. The page also offers a link to a newsgroup called Eliminate-the-IRS. ♦

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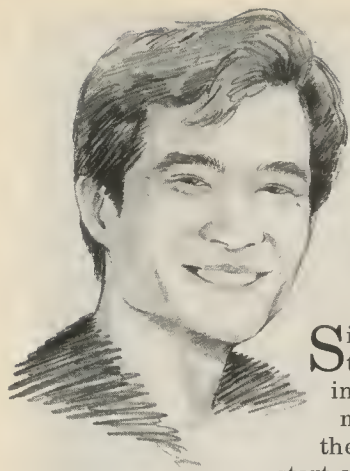
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BIG BOARD BRIEFS by Wallace Wang

NBC AND MICROSOFT MAKE A DEAL

Since no one knows where the computer, television, or online markets may be heading, Microsoft and NBC have teamed up to make sure neither one of them gets lost in the confusion. Microsoft and NBC plan to start a 24-hour combination cable news channel and computer online service.

The cable television venture will be dubbed **MSNBC Cable**, while the online service will be called **MSNBC Online**. Both services will include hard news stories mixed with video, sound, and still pictures. In their grand scheme, people can watch NBC to catch the latest headlines, switch to MSNBC Cable for more in-depth coverage (and maybe fewer commercials), then dial into MSNBC Online to download information on their own personal computer.

Such a three-pier system of news delivery and interactivity will either provide greater news coverage from around the world and inform the general public about important events on the other side of the planet, or it will generate a new breed of couch potatoes who have nothing better to do with their lives except stare at a flickering screen and believe everything they see and hear without regard to any political or economic motivations Microsoft or NBC may have in promoting or ignoring certain stories and facts.

PRODIGY OPENS "VIRTUAL MALL"

Prodigy has rounded up fifteen stores such as JC Penny, Sears and Land's End to start a "virtual mall" where Prodigy customers can browse and shop online. After testing the concept on Prodigy, the "virtual mall" plans to open its virtual doors to the Internet as well. Just remember that the "virtual mall" requires cold, hard cash to pay for your purchases. If this concept proves successful, maybe the era of the mega-shopping malls may fade in importance and teenagers will have to find another place to gather. (Hey kids, how about the public library?)

EUROPEAN ONLINE MARKET HEATS UP

Now that going online has become fashionable, online services are staking out territories in other parts of the world, particularly in Europe since that's where the money lies. Besides the American competition consisting of CompuServe and the Microsoft Network, there's Planet Internet (in Holland), Italia Online (in Italy, where else?), Infonies (from France), and Europe Online (based in Luxembourg). So into this fray comes the "Ugly American" of the online services, America Online, which hopes they can have the same impact in Europe as they do in America

(which means annoying European customers for a change with floppy disks that nobody really wants).

Of course, America Online still has to pass the scrutiny of the European Commission, which is investigating America Online's deal with German publisher Bertelsmann AG and German phone giant Deutsche Telekom. Apparently the Commission is concerned about Deutsche Telekom's involvement in the venture because of its control over telecommunications networks that are needed by competing online services.

TIME MAGAZINE DEFECTS TO COMPUSEVE

After sitting on their thumbs and letting America Online walk away with the lead in the online market, CompuServe is finally fighting back. Rather than fight America Online by sending floppy disks in every computer magazine imaginable, CompuServe has opted for a guerrilla warfare approach by stealing America Online's content providers instead.

CompuServe reportedly offered *Time Magazine* a guaranteed **\$3.5 million** to defect from America Online and move to CompuServe. Apparently CompuServe figures that people may sign up to America Online in droves because of the ubiquitous floppy disk offers, but if they don't see anything worthwhile, they'll eventually leave and investigate rival services like CompuServe instead.

Time Magazine isn't the only content provider that CompuServe is stalking. With millions of dollars in its budget, CompuServe plans to raid other online services for their content providers as well. Of course, that assumes that CompuServe doesn't bankrupt themselves right out of business in the process.

JAVASCRIPT ENDORSED BY AMERICA ONLINE AND MICROSOFT

According to a joint release, several major computing concerns have agreed to integrate JavaScript in future products. The companies include America Online Inc., Apple Computer Inc., AT&T Corp., Borland International Inc., Digital Equipment Corp., Hewlett-Packard Co., Intuit Inc., Novell Inc., Oracle Corp., Sybase Inc., and Toshiba, among others. Not to be left out of the mad Internet marketing rush, Microsoft has agreed to license the Java language as well.

Perhaps with everyone following the same standard, our computers will finally work the way the advertisements always claim they should. Then again, when was the last time computers ever did anything their advertising claimed they would?

Wallace Wang is the author of *CompuServe For Dummies*, *Procomm Plus for Dummies* and *Visual Basic for Dummies* (all published by IDG Books) as well as *Surfing The Microsoft Network*, published by Prentice-Hall). He also does stand-up comedy in the San Diego area, and has appeared on A&E's "Evening at the Improv" TV comedy club. He can be reached via e-mail at: 70334.3672@compuserve.com or botheekat@aol.com or bo_the_cat@msn.com

PERSONAL WEB PAGES

Prodigy offered this feature several months ahead of its competitors. Now you can make your own web page if you subscribe to America Online or CompuServe. Naturally, you'll be limited in the size (and content) of your web pages and you won't have a descriptive web address like www.microsoft.com. Instead, you'll be stuck with the America Online or CompuServe address followed by a dash such as www.compuserve.com/mywebpage.

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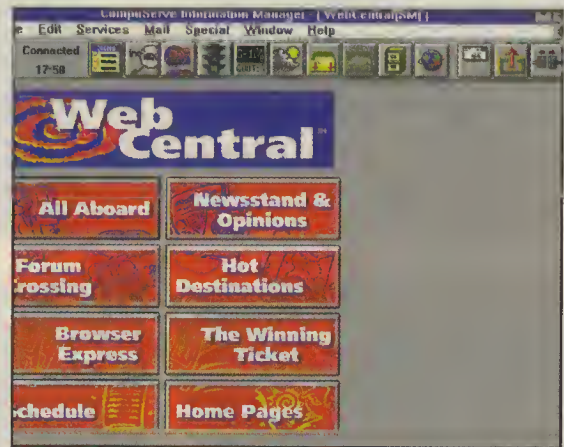


COMPUERVE AND MICROSOFT TO SHARE WEB BROWSERS

After pushing their weak Mosaic web browser on hordes of unsuspecting CompuServe members, CompuServe has decided not to battle Netscape or Microsoft for the web browser market lead. Instead, CompuServe has agreed to license the Microsoft's Internet Explorer World Wide Web browser.

CompuServe says it will include a customized version of Internet Explorer in upcoming versions of its retail and corporate Internet suites: Internet In A Box, Internet In A Box for Kids, Mosaic In A Box and Internet Office. Internet Explorer will also be included with new client software versions of CompuServe Information Service software and the company's new consumer online service, code-named WOW!

To get the CompuServe version of Internet Explorer, visit CompuServe's home page (<http://www.compuserve.com>) or SPRY's home page (www.spry.com). Or visit WebCentral (**GO WEBCENTRAL**), a new area on CompuServe that lets users download different Web browsers that they can use to access the Web through CompuServe.



MICROSOFT MAPS OUT INTERNET STRATEGY

To avoid getting lost in the Internet rush, Microsoft plans to wholeheartedly embrace the Internet. First, Microsoft plans to redesign the Microsoft Network so it's less of a proprietary online service and more like an Internet site. In Microsoft's dream, people will be able to access the Microsoft Network through direct dialing or through the Internet. In addition, many parts of the Microsoft Network may actually be free for all callers to use without paying the monthly fee normally associated with online services.

Using their existing applications as leverage, Microsoft plans to integrate their Internet Explorer program into Word, Excel, and PowerPoint in Office 96. Unlike today's latest versions that provide a simple one-click access to the Microsoft Network, these new versions will provide a simple one-click access to the World Wide Web.

Finally, Microsoft is beta testing a virtual reality modeling language (dubbed Active VRML), which will allow callers to explore three-dimension virtual worlds. (Naturally the first widespread applications will likely be pornography, but we're sure to see some educational content eventually.)

PRODIGY INVESTS IN SONICNET

In their continuing effort to merge with the World Wide Web, Prodigy has invested in **SonicNet**, a Soho, N.Y., company known for its coverage of rock and alternative music on its own web site. SonicNet gets a handful of cash to hire more staff while Prodigy gets exclusive content developed by SonicNet such as chats with celebrity rock musicians who haven't overdosed on any recreational chemicals yet.

Prodigy plans to invest in other Web content providers as well, snapping them up for Prodigy's exclusive use before the other online services grab them first. In this mad frenzy of the online market race, perhaps investing or starting your own content provider can be your ticket to fame and riches. Since money talks, investing in content providers may be the only way online services can keep content providers from defecting to rival online services. ♦



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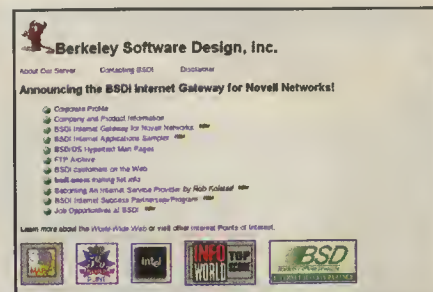


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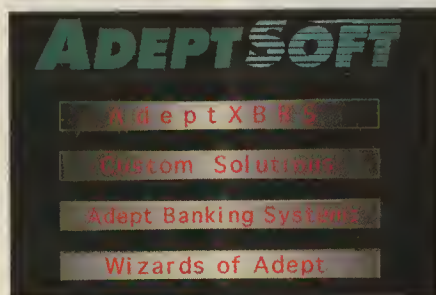
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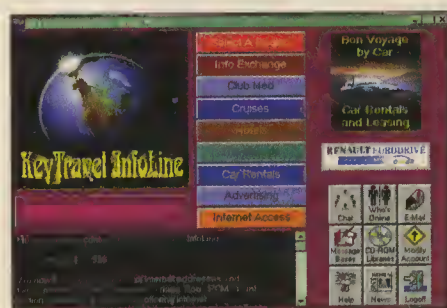
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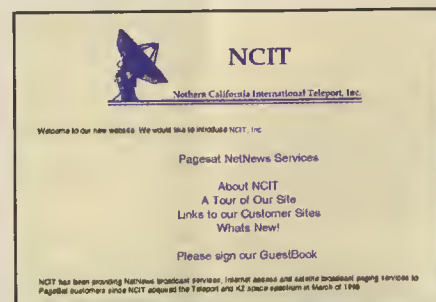


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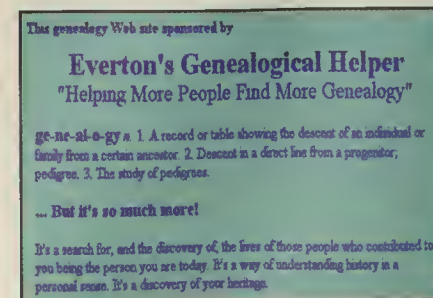
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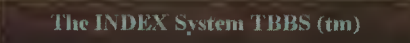
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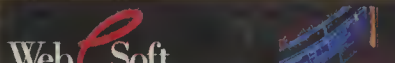
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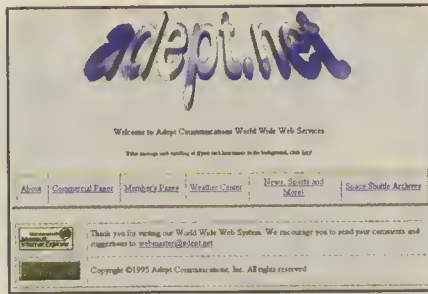
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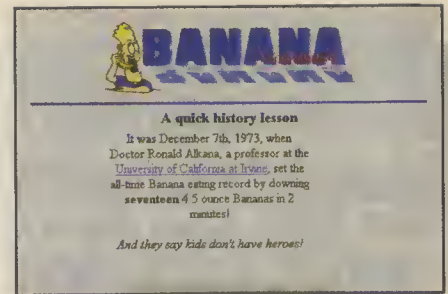
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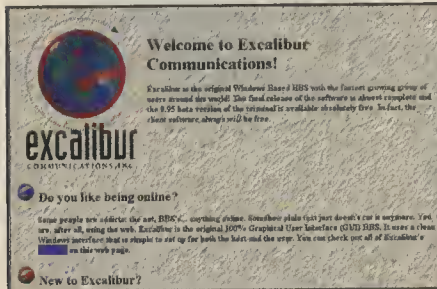
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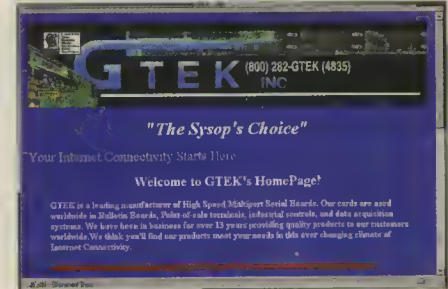
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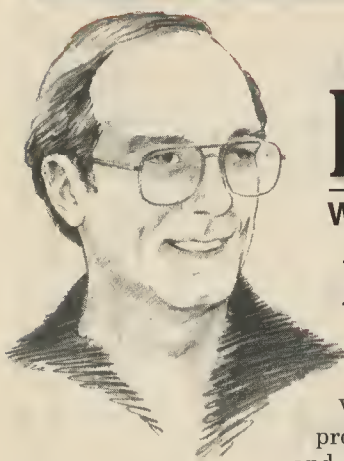
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DIRECT DIAL by David Hakala

W. PIERCE ELECTRONICS BBS

Bill Pierce had no idea where his one-line Wildcat! BBS would take him. He started the W. Pierce Electronics BBS at (607)433-1451 in 1993, as a support system for his customers. Pierce owns Pro-Video Productions, a high-quality video production company that films commercials and other short takes in Oneonta, New York (pop. 20,000). But Pierce instinctively knew that a BBS had to be an ever-evolving community, full of fresh activities and people. He added games, G-rated files, community information resources and online shopping catalogs. The BBS became a popular attraction, modestly priced at \$40 a year or \$20 for four months. Today, it sports four 28.8 Kbps lines.

Within a year, Pierce added UUCP e-mail and selected newsgroups (the system assiduously eschews "adult" material). The Internet was a hit, prompting Pierce to add outbound telnet, ftp, gopher and other text-based services.

Naturally, that led to PPP service, priced at \$19 per month for unlimited use, with a \$20 one-time setup fee. Pierce strongly believes in making his Internet presence a community resource. A company web page at <http://www.wpe.com> is mostly devoted to local businesses, schools, tourist attractions such as the National Soccer Hall of Fame and the Oneonta Muscular Dystrophy Telethon. Users get personal home pages alongside those of WPE employees.

Before long, Pierce found himself in the ISP business, providing dedicated lines and IP connectivity to businesses throughout the Otsego County area. He also picked up a contract, funded by federal grants, to bring full Internet access to eleven local schools.

While he never expected this much from the Internet business, Pierce willingly rolls with the flow. The company now sports five T1 lines and buys its access from two providers – UUNET Technologies and MCI Internet. WPE is adding POPs in other Otsego County calling areas, and Pierce expects geographic coverage to spread at least throughout the state, and perhaps the Northeast region.

Most of WPE's PPP customers are novices. About half of them defect from one of the Big Three online services when they learn of WPE's flat-rate prices and high-speed modem lines. Bill's philosophy is, "We never want a customer to leave unhappy." His highly trained help desk staff is adept at getting first-timers up and running without pain, and sympathetic ears are available till 9:00 p. m. weeknights.

All this started just two years ago, with a one-line BBS. When asked where he thought the Internet would take WPE next, Pierce cautiously and optimistically says, "Y'never know!" ♦

Bill Pierce, ISP, and brother Dr. Paul Pierce (right)



David Hakala first appeared in *Boardwatch* in March, 1989. From May of 1991 until he assumed the position of Editor at Fault at *BW* in April, 1995, David wrote for a number of trade and mainstream journals, co-authored the book *Hot Links* with Mark Eppley, CEO of Traveling Software, and penned his own book, *Modems Made Easy*, which entered its second edition in March, 1995. In his spare time, David enjoys science fiction, billiards, country-western music and catching crayfish with his son, Tony Eric. David can be reached at mailto: david.hakala@boardwatch.com or at (303)973-6038.



CANADA

RHEMA BBS204-269-6728
 NEWS Information
 System403-424-9979
 New Horizon Pet Shop .403-452-8090
 Six Sigma Systems ...403-466-7794
 Redeye BBS403-472-8089
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 Mind Link!604-528-3500
 Studio Line BBS604-533-3245
 Servant's Quarters ..604-726-2577
 ACTS Nanaimo604-754-3498
 Daystar BBS604-785-8798
 Mind Link!604-855-1701
 NWnet604-878-0466
 Agape Christian BBS .604-882-9107
 Agape Christian BBS .604-930-2465
 NWnet604-944-0622
 Expressions BBS604-945-9535
 Mind Link!604-960-4250
 Fisherman's Scroll705-253-3754
 Fisherman's Scroll705-253-5366
 Churchlight Standard705-560-0943
 Computer's Choice705-737-9365
 Computer's Choice705-737-9366
 Transitions BBS905-355-5494
 Servant's Quarters, The905-471-9464
 Niagara On-Line905-734-8827
 Dr. Who BBS905-792-7247
 InfoTech Online905-935-9484

The Computer Aided Ministry Society (CAMsoc) is based in Vancouver, British Columbia. Founded in November, 1988, CAMsoc operates several projects in support of Christians around the world who are interested in using computers in the service of Christ. CAMsoc publishes the CAMSOC-UPDATE Internet mailing list; <mailto:hub@xc.org> with the message **SUBSCRIBE CAMSOC-UPDATE <address> (Firstname Lastname)** where <address> is your Internet e-mail address (without the brackets). CAMsoc has a Web site at <http://bible.acu.edu/ctt/camsoc.htm> where you will find news of other projects and pointers to more resources.

CAMsoc also publishes a world-wide list of Christian-oriented BBSs, which is available at CAMsoc's web site and distributed in the ASCII file **NETMAP.ZIP** via participating BBSs. **J**

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Family-Health-Spirit ..201-736-2493
 Sea of Noise203-886-1441
 A.J.'s BBS206-347-5877
 A.J.'s BBS206-355-5755
 Divinity BBS207-490-5844
 Root Connection, The ..209-576-1606
 Christ's Corner213-938-6579
 Christian Retreat214-221-7198
 Prophts BBS214-222-7519
 Cleveland Christian ...216-381-1219
 Voice in the Wilderness .216-741-6244
 Avon Lake BBS216-933-6165
 John 3:16 BBS301-208-0855
 Christian Connection ..301-470-2354
 Harvester301-596-1044
 SMCIS301-862-3160
 Missions Possible!302-674-5278
 Sound Doctrine BBS ...303-680-7209
 Berean Connection303-693-9263
 Servant Christian310-371-2770
 Christ Connection310-398-7804
 Origins Talk (CFN)314-821-1078
 Word BBS, The315-894-5829
 Communications
 Complete316-367-8490
 Human Machine, The ..317-787-0495
 Spiritual Warfare BBS ..318-463-5654
 Genesis One BBS318-982-7668
 He Lives BBS360-683-7760
 SonBoard405-248-4982
 Shepherd's Staff, The ..405-252-1364
 Messiah BBS405-477-0616
 WordShop, The405-765-0951
 Montana Medianet406-251-4895
 Valley Light406-273-6399
 Barney's PipeLine!407-728-7386
 Silicon Valley BBS408-246-6353
 Silicon Valley BBS408-246-7002
 OCNet BBS408-286-2263
 ICON408-336-5389
 Logos408-899-4552
 Wit-Tech410-256-0170
 Berkshire Board, The ..410-488-9361
 Baltimore Christian Net .410-668-2304
 Angelus415-967-3420
 Eagle's Nest417-673-8835
 Alpha-Omega BBS417-862-5584



Cyber Info Research	423-339-5632	Gardens BBS, The	713-556-9167
Power Outlet BBS, The	423-476-1902	Polar Bear Motel, The	713-692-8527
Final Edition, The	423-490-0833	Phoenix BBS, The	713-728-3012
Fountain BBS, The	423-490-0998	Hot Pursuit BBS	713-852-7060
Talk Show, The	423-697-7050	Fish Bowl, The	713-894-6062
Roadside Cafe/2, The	423-875-0702	Mel Douglass	713-896-1545
River Canyon Road BBS	423-886-2521	Cor Unum	714-531-7255
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Images BBS	503-461-2534	Saltshaker BBS	714-850-1539
ICLnet	503-598-7884	Church Online	717-393-9966
Reunion BBS	504-738-1207	Abundant Life BBS	770-443-3383
Reunion BBS	504-738-5162	Mountain BBS, The	770-819-6860
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Meadow BBS, The	509-465-9467	Lighthouse BBS	803-220-5835
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Hartmann's BBS	509-884-7803	Glory Bound BBS, The	803-592-5208
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Trib Watch	520-325-1433	Agape BBS	806-795-9003
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Desert Reef BBS, The	520-624-6386	Association Mac BBS	810-695-6955
Cornerstone BBS	602-899-9329	Christian Mailbox, The	810-742-7799
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Fisherman's Net	614-837-0400	Hook Line and Sinker	815-727-1195
Basic Beauty BBS	615-269-3623	Bereans Bible Study BBS	817-526-8972
A Spyer BBS	615-831-9284	Fire Point	817-592-9414
Rock BBS	615-834-3914	Mission Board, The	817-627-8037
Woodsong Keep	615-834-8029	Tavern BBS, The	817-699-4890
Sorrow's Path	615-895-2151	Echoes of Calvary	817-755-8859
Day Star BBS	615-896-6870	Fortress, The	817-763-5583
Vision BBS, The	615-896-7949	Texas Beacon	817-767-6604
Crimson Cross BBS	618-253-3608	Upper Room, The	817-799-9722
Christ Line	619-268-3568	NightShift	817-855-1526
Cornerstone On-Line	619-498-1751	Small Fry, The	901-385-8756
Free Zone Christian BBS	619-582-2402	Linden Room, The	901-837-8943
Lord's Way, The	702-870-5664	Maranatha	904-353-3853
IXOYE BBS	703-381-9758	Haven of Rest BBS	904-474-0992
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Morning Star	713-265-2798	Bat Cave, The	918-445-1355
Set Free! BBS	713-324-4421	Christnet	918-495-7012
Christian Chat BBS, The	713-451-8406	Cross Connection, The	918-583-5109
Eternity Inc. BBS	713-452-7008	Christian Connection II	970-352-5013
BillClaire Mortuary BBS	713-498-6163		



AUSTRALIA

DealBlue Support BBS	.61-2-872-6126
Helping Hand, The	.61-2-872-3571
Ministry Support Group	.61-2-871-5878
Computing Out West	.61-6-862-5145
Brisbane Christian BBS	.61-7-285-5322
Brisbane Christian BBS	.61-7-888-5506
Christian BBS, The	.61-7-446-6388
G-Force	.61-7-245-1177
Galaxy Gateway	.61-7-426-8557
Village BBS	.61-7-820-6034
Narrow Way BBS, The	.61-77-232559
Camelot Swamp	.61-8-370-2133
Teen Challenge BBS	.61-8-341-6345
Archive BBS, The	.61-3-9752-5527
Bible Lighthouse	.61-3-726-0110
Good News Australia	.61-3-9803-2726
Library Network, The	.61-9-257-1309

BELGIUM

Info Centre Sekten BBS	.32-15-415383
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BERMUDA

Christian Deliverance	.1-809-292-1774
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BRAZIL

Explorer BBS	.55-85-272-4839
Farol BBS	.55-85-224-0449
Fortal BBS	.55-85-224-4233
Leps BBS	.55-85-261-4793
Mania BBS	.55-85-226-6281
Strike BBS	.55-85-227-9617
Tropical BBS	.55-85-287-3299
Waycom BBS	.55-85-268-3181
Educnet BBS	.55-61-347-2483
Educnet BBS	.55-62-223-2730
Trantor BBS	.55-31-296-8912
Kanopus BBS	.55-41-225-2582
ECS BBS	.55-51-336-3084
Becker's BBS	.55-11-584-0352

ENGLAND

Brook at Cherith, The	.44-121-6807784
Ekklesia BBS	.44-161-2485743
Christian Information	.44-1865-311622
Ichthus Christian BBS	.44-1734-461466
Ichthus Christian BBS	.44-1734-464937
Trinity #1	.44-1392-495899
Trinity #1	.44-1392-412370

Barnabas the Caring BBS	.44-1708-670068
Speedmail	.44-1132-320351
Kingdom BBS	.44-1384-442449

GERMANY

LifeBox Muenster	.49-25-34-5215
Salvation Army BBS	.49-72-31-21173

GUAM

Solid Rock BBS	.671-734-4766
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JAPAN

JemaNET	.81-3-3295-1953
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NETHERLANDS

SDA BBS #1	.31-55-788-070
Zonnewende BBS	.31-70-30-10577
Da Big Busy Bored	.31-71-213747

NEW ZEALAND

Place to Stand, A	.64-3-216-2947
Little Ark	.64-6-868-4875
New Horizons BBS	.64-7-843-0304
Way BBS, The	.64-7-847-2478
Christian Comms Centre	.64-9-287-4761

PHILIPPINES

JMF BBS	.63-2-293-0902
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SOUTH AFRICA

A.C.C.E.S.S.	.27-21-919-0300
Synchronous Black Hole	.27-21-215228
Edurek Software BBS	.27-28-232-8788
Acis BBS	.27-31-423516
Friendly City BBS	.27-41-511-185
Diakonos	.27-44-181652
Top-Line BBS	.27-11-828-9315
Unisa Editorial BBS	.27-12-429-8641

SWEDEN

Skrott'n KRISTEN BBS	.46-31-291546
FrontLine BBS	.46-8-739-1510

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DVORAK ONLINE by John C. Dvorak

NEVER-ENDING DEATH OF THE COMPUTER

The biggest missing element in the world of computers is the old-fashioned hobbyist. If you haven't noticed, there are few enthusiasts left. People no longer like computers because they are fun. They have indeed become what we've always said they would become — tools. As boring as a socket set. But even so, we want the most powerful tool we can afford, so progress continues.

Now I kind of miss the enthusiasts and their collective attitude. Most of them disappeared by the mid 1980's. They were sick of buying new equipment every few months. Many of the earliest drop-outs still run an old CP/M system! They have no interest in running Windows let alone Windows 95 or OS/2 or any such thing.

A hobby is a contemplative thing. Stamp-collecting is a good example, and computers are an ill-chosen hobby. I should know, since I feed my habit by writing about the things. The last of the hobbyists are like me. They've found some job within the industry. A job with a budget to sustain their interest. But even for them it's hard to keep up.

I have access to just about everything and still find it hard to stay abreast of the scene. I usually work on one or two technologies at a time, then when I'm up to speed I go to another to find that I'm way behind. I manage to catch up on that technology to fall behind in another. I get up to speed on ISDN to fall behind in optical disk technology, so I catch up there and suddenly ADSL sneaks up on me. I'm still trying to get that straight. "Don't worry about it, it's a local loop thing, ATM is more important," I'm told. This is a hellish life. Take a week off and you suffer for months. No wonder the hobbyists have bailed out. The few that are left are surfing the Web staring at the screen like burned out zombies.

When the personal computer scene began it was a hobbyists-only business, since the first machines came as kits. And we're not talking about a card cage with a few boards to slap in. We're talking about components that were soldered onto a board a piece at a time. I've always been amused by people who tell you they "built" a computer and what they mean is they threw some cards onto a mother board and screwed in a power supply. Saying this is "building" a computer is like saying you "built" a bicycle because you put a couple of wheels and a seat on a boxed unit you received for Christmas. "I built that Bicycle!" "Really? It says Schwinn!"

Most of those people with the soldering guns or wire-wrap devices involved in those early days have long

since left the scene. They've been replaced with computer experts who program in C++ or the language du jour (Java). Also stepping in are the pathetic know-it-all newbies who are all over the place. It's this last group that bugs me the most. These are the people who claim to be "old-timers" because they had a computer as far back as 1989.

Maybe some of these people bring new energy to the scene, young blood. What I see more of, though, is an enthusiastic reinvention of the wheel. That whole \$500 Internet terminal is a perfect example. Most recently I was looking at the Apple Pippin — a ludicrous web browser kind of device that allows your TV to be a Net terminal. The device, though, is designed to have no keyboard. At first I thought this was dumb. Any interesting Web site requires some sort of alphanumeric input, doesn't it? Sure, but then I realized that a brain-dead device like this is for the brain-dead. If you really want to surf the Web brain-dead you get on the Pippin and like a channel-surfing maniac with a TV gun you forever change channels, never bothering to stop on anything long enough to need a keyboard. You just keep going until you've plowed through all 250,000 web sites. I figure it will take from 2-5 years to actually access all the sites. Then you can start over and see how many have actually updated since you last hit the page five years ago.

One thing we've learned over the years is that people, once introduced to computers, want more computer, not less (except for the drop outs who now want no computer power out of spite). When I talk to people who are getting their next computer — or even their first computer — I've noticed a change in attitude of late. Years ago people would try to nickel-and-dime their purchases. This, I reckon, is a holdover from the hobbyist days and the influence of the enthusiasts. I mean if you're willing to solder together a machine to save a few hundred dollars, you are really into saving money. The formative years of the small computer revolution was preoccupied with getting as much power as you could for as little money as possible. Most early users in the 1970s would always go on and on about how the little SOL-20 had more power than a \$100,000 computer of a few years earlier. Today nobody talks about how a Pentium machine on the desktop has more computer power than the mainframe or the Cray of a decade back with a price comparison. Fact is, nobody much cares anymore about this.

This missing pride has fascinated me. Suddenly the computer along with the Net (it's not new either!) seem to have become mystical magical things that stand alone in society with roots to the past severed completely. Is this a generation-X thing or worse, has the computer become so complicated — under

In addition to his weekly syndicated radio call-in show, "Software/Hardtalk," syndicated newspaper columns, magazine writing for *MacUser*, *PC Computing*, *DEC Professional*, *Information Technology*, and his featured "Inside Track" column in *PC Magazine*, Dvorak is the author of several best-selling books, including *Dvorak's Inside Track to DOS & PC Performance*, *Dvorak's Guide to PC Telecommunications*, and *Dvorak's Inside Track to the Mac*. John can be reached at <mailto:dvorak@aol.com>

the guise of simplicity — that we don't even want to consider it as something we can understand and discuss in relationship to the computers of the past?

As I look at the 21-inch screen of my 133 Mhz Micron with its 2.3 gigabyte hard disk and 32 megs of memory I think back on the SOL-20 of 1977 with its Northstar floppy disk with something like 70Kb of mass storage. The Sol with its 32k of main memory was "loaded." In 20 years progress has been marked by the advent of color monitors, the graphical user interface and bloated code requiring gobs of memory and screaming processors. To accommodate the progress we've had to spend ourselves silly every 18-24 months just to keep up. Then we've had to suffer to keep the machines running. This rat race is ridiculous and perhaps we don't want to face the fact that we're in a squirrel cage regarding these machines. So perhaps the user community has collectively decided to forget the past and pretend it never happened. Everything is new and glorious.

By focusing our attention on the Net we make the computer more transparent than ever before. In fact it is just a smart terminal when surfing. And why should a terminal be so expensive? Heck, why even have the computer? Let's just have the terminal and let the machine on the other end be the computer. It seems like an interesting idea and if network speeds were fast enough it might even work. But we've tried this before; we didn't collectively like it then, and we will not like it again. As much as we want to forget the past the fact is it is still there. Duh!

And it tells us that we want as much computer power to ourselves as we can get. This is the one thing we've learned. Jerry Pournelle used to talk about how there will someday be one micro-processor for every person. Now it seems there may be two or three within the same machine for every person. Heck, maybe in a few decades we'll all be running hypercubes with 64 or more cpus per person. Just remember, a smart terminal or a dumb terminal underneath the skin is a computer too. Only it's not a 166 Mhz Pentium. It's some slow clunker. Let me say to any doubting Thomases out there (and you can pass this along) if you own a computer you want the most powerful machine you can afford. If you don't have it, you lose interest and drop out. It's weird but true. This is what happened to the hobbyists who were used to a certain pace and a certain expense. They fell too far behind and lost interest — and many were pioneers! All that cheap low-end equipment does is end up in closets — the Commodore 64 phenomenon. Most Commodore 64 users never went back into computers. These cheap terminals some companies will try and sell (probably with some success) will just derail a lot of potential computer users and end up in the closet. Five years from now I'll be bitching about how all these Net surfers bailed out from the computer scene and how in 2001 we're stuck with newbies who consider themselves old-timers because they got a computer in 1996. It never ends. ♦

DVORAK'S RECIPE NOOK



An American Classic

In many of the most exclusive restaurants you'll find an American staple and popular bread: corn bread. It's funny at how the most expensive places will rediscover corn bread, add their little twist (usually in the form of more butter) and get praise from gourmands who should make this simple bread at home. This recipe was adapted by one found in the Mystic Seaport Cookbook.

GENERIC CORN BREAD

Ingredients

- 2 1/2 cups of corn meal
- 2 cups flour
- 2 cups milk
- 1/2 cup cut corn (optional)
- 1 teaspoon salt
- 1 teaspoon baking soda
- 2 teaspoons cream of tartar
- 3 eggs beaten
- 3/4 cup sweet butter
- 1 cup sugar

Let the cornmeal soak in the milk overnight then beat in flour and other dried ingredients followed by the eggs, butter and finally the sugar. Put the batter in a couple of buttered loaf pans and cook at 425 for 25 minutes. This can also be cooked in cake pans and sliced like a pie or you may find those nifty cast-iron corn bread trays which make each piece look like a small piece of corn.

You can vary the thickness of the batter with additional flour or milk. You may also want to experiment with various corn meals, especially those sold all over the New England area made by historic mills that are still in operation. Never pass up a chance to try a famous cornmeal. I'd also advise you look into blue cornmeal which is credited with having the most corn flavor.

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4 Monterey Gaming System	408-655-5555	Custom interactive gaming and multi-user conferences	Custom	32
5 Blue Ridge Express	804-790-1675	Large files base with 3 Gigabytes and CD-ROMs	RBBS	33
6 Deep Cove BBS	604-536-5885	News, publications, Internet email, shareware	TBBS	18
7 AlphaOne Online	708-827-3619	Adults only, matchmaking, personals, email	TBBS	16
8 America's Suggestion Box	516-471-8625	13 Gigs of Shareware, Internet email, Usenet newsgroup	TBBS	74
9 Lifestyle Online	516-589-5390	Chat system, adult lifestyles, personals, email	OraComm	400
10 Prodigy Genealogy	800-775-7714	Information and help of searching for people	TFF	64
11 Chrysalis	214-690-9295	34 CD-ROMs online, Internet email, online games	TBBS	10
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15 Springfield Public Access	703-385-4325	4000 Usenet newsgroups, full Usenet	PCBoard	1
16 OS/2 Shareware	215-443-7390	Full Internet, Internet accounts, full Usenet	SHS	1
17 DSC	614-224-1635	No fees, full access on first call, 12 Gigs online	PCBoard	1
18 Wizards's Gate BBS	708-820-8344	Illinois's largest filebase, message base	TBBS	1
19 Aquila BBS	615-383-0727	Internet, Usenet, FidoNet, shareware, online games	RA Pro	1
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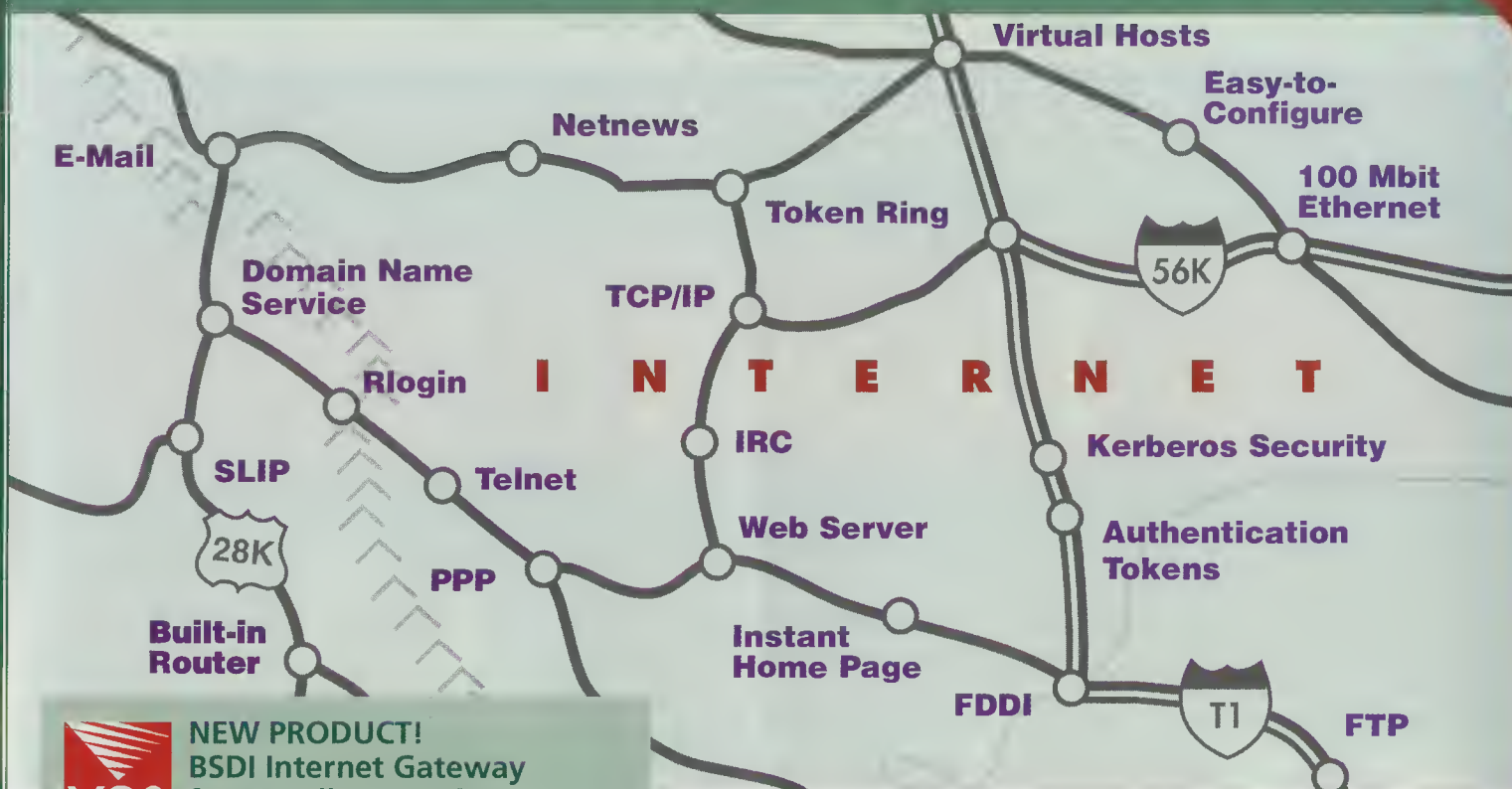
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